UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended June 30, 2019
OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ____ to ____
Commission File Number: 001-38098

APPIAN CORPORATION
(Exact Name of Registrant as Specified in its Charter)

Delaware	**54-1956084**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
7950 Jones Branch Drive Tysons, VA	**22102**
(Address of principal executive offices)	**(Zip Code)**
11955 Democracy Drive, Suite 1700 Reston, VA	**20190**
(Former address)	**(Zip Code)**

Registrant's telephone number, including area code: (703) 442-8844

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading symbol	Name of each exchange on which registered
Class A Common Stock	APPN	The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☒
Non-accelerated filer	☐	Small reporting company	☐
Emerging growth company	☒		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of August 5, 2019, there were 31,509,538 shares of the registrant’s Class A common stock and 33,374,676 shares of the registrant’s Class B common stock, each with a par value of $0.0001 per share, outstanding.

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PART I—FINANCIAL INFORMATION

Item 1. FINANCIAL STATEMENTS

APPIAN CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

	As of June 30, 2019 (unaudited)	As of December 31, 2018
Assets		
Current assets		
Cash and cash equivalents	$ 81,101	$ 94,930
Accounts receivable, net of allowance of $600 as of June 30, 2019 and December 31, 2018	70,381	79,383
Deferred commissions, current	17,492	14,020
Prepaid expenses and other current assets	7,707	21,293
Total current assets	176,681	209,626
Property and equipment, net	36,823	7,539
Deferred commissions, net of current portion	13,897	15,088
Deferred tax assets	445	326
Other assets	585	601
Total assets	$ 228,431	$ 233,180
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	$ 10,173	$ 9,249
Accrued expenses	12,075	7,464
Accrued compensation and related benefits	10,563	13,796
Deferred revenue, current	97,556	95,523
Capital leases, current	1,169	—
Other current liabilities	1,852	2,369
Total current liabilities	133,388	128,401
Deferred tax liabilities	20	42
Deferred revenue, net of current portion	14,597	16,145
Deferred rent, net of current portion	20,150	15,400
Capital leases, net of current portion	2,504	—
Total liabilities	170,659	159,988
Stockholders' equity		
Class A common stock—par value $0.0001; 500,000,000 shares authorized and 31,462,892 shares issued and outstanding as of June 30, 2019; 500,000,000 shares authorized and 29,626,054 shares issued and outstanding as of December 31, 2018	3	3
Class B common stock—par value $0.0001; 100,000,000 shares authorized and 33,374,676 shares issued and outstanding as of June 30, 2019; 100,000,000 shares authorized and 34,290,383 shares issued and outstanding as of December 31, 2018	3	3
Additional paid-in capital	230,185	218,284
Accumulated other comprehensive income	152	542
Accumulated deficit	(172,571)	(145,640)
Total stockholders' equity	57,772	73,192
Total liabilities and stockholders' equity	$ 228,431	$ 233,180

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

APPIAN CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except share and per share data)
(unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Revenue:				
Subscriptions, software and support	$ 39,259	$ 33,047	$ 74,168	$ 59,999
Professional services	27,652	26,836	52,322	51,580
Total revenue	66,911	59,883	126,490	111,579
Cost of revenue:				
Subscriptions, software and support	4,036	2,824	7,621	5,452
Professional services	19,015	18,750	39,496	37,171
Total cost of revenue	23,051	21,574	47,117	42,623
Gross profit	43,860	38,309	79,373	68,956
Operating expenses:				
Sales and marketing	31,148	27,384	61,093	50,348
Research and development	12,765	10,785	26,721	20,655
General and administrative	9,261	8,425	18,277	16,485
Total operating expenses	53,174	46,594	106,091	87,488
Operating loss	(9,314)	(8,285)	(26,718)	(18,532)
Other (income) expense:				
Other (income) expense, net	(256)	2,593	(316)	1,675
Interest expense	69	54	140	67
Total other (income) expense	(187)	2,647	(176)	1,742
Loss before income taxes	(9,127)	(10,932)	(26,542)	(20,274)
Income tax expense	267	35	389	246
Net loss	$ (9,394)	$ (10,967)	(26,931)	(20,520)
Net loss per share attributable to common stockholders:				
Basic and diluted	$ (0.15)	$ (0.18)	$ (0.42)	$ (0.34)
Weighted average common shares outstanding:				
Basic and diluted	64,753,044	61,401,466	64,531,089	61,127,516

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

APPIAN CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands)
(unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Net loss	$ (9,394)	$ (10,967)	$ (26,931)	$ (20,520)
Comprehensive loss, net of income taxes:				
Foreign currency translation adjustment	(730)	1,103	(390)	537
Total other comprehensive loss, net of income taxes	$ (10,124)	$ (9,864)	$ (27,321)	$ (19,983)

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

APPIAN CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY
(in thousands, except share data)
(unaudited)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance January 1, 2018	60,599,877	$ 6	$ 141,268	$ 439	$ (96,189)	$ 45,524
Net loss	—	—	—	—	(20,520)	(20,520)
Issuance of common stock to directors	6,605	—	—	—	—	—
Exercise of stock options	1,006,398	—	2,072	—	—	2,072
Stock-based compensation expense	—	—	4,446	—	—	4,446
Other comprehensive income	—	—	—	537	—	537
Balance, June 30, 2018	61,612,880	$ 6	$ 147,786	$ 976	$ (116,709)	$ 32,059
Balance, January 1, 2019	63,916,437	$ 6	$ 218,284	$ 542	$ (145,640)	$ 73,192
Net loss	—	—	—	—	(26,931)	(26,931)
Issuance of common stock to directors	6,145	—	—	—	—	—
Vesting of restricted stock units	284,690	—	—	—	—	—
Exercise of stock options	630,296	—	1,987	—	—	1,987
Stock-based compensation expense	—	—	9,914	—	—	9,914
Other comprehensive loss	—	—	—	(390)	—	(390)
Balance, June 30, 2019	64,837,568	$ 6	$ 230,185	$ 152	$ (172,571)	$ 57,772

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

APPIAN CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(unaudited)

	Six Months Ended June 30,	
	2019	2018
Cash flows from operating activities:		
Net loss	$ (26,931)	$ (20,520)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	1,933	951
Loss on disposal of equipment	145	—
Bad debt expense	97	—
Deferred income taxes	(47)	77
Stock-based compensation	9,914	4,446
Changes in assets and liabilities:		
Accounts receivable	8,861	(9,095)
Prepaid expenses and other assets	13,453	(311)
Deferred commissions	(2,281)	(3,062)
Accounts payable and accrued expenses	5,458	3,480
Accrued compensation and related benefits	(3,181)	1,995
Other current liabilities	(269)	951
Deferred revenue	189	(1,368)
Deferred rent, non-current	4,584	(1,160)
Net cash provided by (used in) operating activities	11,925	(23,616)
Cash flows from investing activities:		
Purchases of property and equipment	(27,689)	(1,593)
Net cash used in investing activities	(27,689)	(1,593)
Cash flows from financing activities:		
Proceeds from exercise of common stock options	1,987	2,072
Net cash provided by financing activities	1,987	2,072
Effect of foreign exchange rate changes on cash and cash equivalents	(52)	(258)
Net decrease in cash and cash equivalents	(13,829)	(23,395)
Cash and cash equivalents, beginning of period	94,930	73,758
Cash and cash equivalents, end of period	$ 81,101	$ 50,363
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 170	$ 21
Cash paid for income taxes	$ 116	$ 175
Supplemental disclosure of non-cash financing information:		
Capital lease obligations to acquire new office furniture and fixtures	$ 3,673	$ —

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

1. Organization and Description of Business

Appian Corporation (together with its subsidiaries, “Appian,” the “Company,” “we” or “our”) provides a low-code software development platform that allows companies to rapidly build powerful business applications. The applications created on our platform help companies drive digital transformation and competitive differentiation. We were incorporated in the state of Delaware in August 1999. As of June 30, 2019, we were headquartered in Reston, Virginia and subsequently moved to Tysons, Virginia. We operate in Canada, Switzerland, the United Kingdom, France, Germany, the Netherlands, Italy, Australia, Spain, Singapore and Sweden.

2. Significant Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements and footnotes have been prepared in accordance with accounting principles generally accepted in the United States (“U.S. GAAP”) as contained in the Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (the “Codification” or “ASC”) for interim financial information. In the opinion of management, the interim financial information includes all adjustments of a normal recurring nature necessary for a fair presentation of the results of operations, financial position, changes in stockholders’ equity and cash flows. The results of operations for the current period are not necessarily indicative of the results for the full year or the results for any future periods. These condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and related footnotes included in our Annual Report on Form 10-K for the year ended December 31, 2018, filed with the Securities and Exchange Commission (the “SEC”) on February 21, 2019.

Use of Estimates

The preparation of our condensed consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and judgments that affect the amounts reported in these condensed consolidated financial statements and accompanying notes. Although we believe that the estimates we use are reasonable, due to the inherent uncertainty involved in making these estimates, actual results reported in future periods could differ from those estimates.

Significant estimates embedded in the condensed consolidated financial statements include revenue recognition, income taxes and the related valuation allowance and stock-based compensation.

Principles of Consolidation

The accompanying condensed consolidated financial statements include the accounts of Appian and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Revenue Recognition

We generate revenue primarily through sales of subscriptions to our platform, as well as professional services. We recognize revenue when all of the following conditions are met: (1) there is persuasive evidence of an arrangement; (2) the service or product has been provided to the customer; (3) the amount of fees to be paid by the customer is fixed or determinable; and (4) the collection of related fees is reasonably assured. If collection is not reasonably assured, we defer revenue recognition until collectability becomes reasonably assured. Our arrangements do not contain general rights of return. Revenue is recognized net of any taxes collected from customers and subsequently remitted to governmental authorities.

Subscriptions, Software and Support Revenue

Subscriptions, software and support revenue is primarily related to (1) software as a service (“SaaS”) subscriptions bundled with maintenance and support and hosting services and (2) term license subscriptions bundled with maintenance and support.

We generally charge subscription fees on a per-user basis or, alternatively, non-user based single application licenses. We bill customers and collect payment for subscriptions to our platform in advance on a monthly, quarterly or annual basis. In certain instances, we have had customers pay their entire contract up front.

SaaS Subscriptions

Our SaaS subscription revenue is derived from customers accessing our cloud offering pursuant to contracts that are generally one to three years in length. We perform all required maintenance and support for our cloud offering and we do not separately charge customers for hosting costs. In these arrangements, our customers do not have the right to take the software on-premises and, as a result, such arrangements are not accounted for within the scope of the software revenue guidance. Revenue from SaaS subscriptions is recognized ratably over the term of the subscription, beginning with the date our service is made available to our customer.

Term License Subscriptions

Our term license subscription revenue is derived from customers with on-premises installations of our platform pursuant to contracts that are generally one to three years in length, with more recent contracts trending towards one year in length. Customers with term license subscriptions have the right to use our software and receive maintenance and support. Since we do not sell maintenance and support separately from the subscription, revenue for the term license subscription and maintenance and support is recognized ratably over the term of the subscription, upon delivery of the platform to the customer when sold on a standalone basis.

Professional Services

Our professional services revenue is comprised of fees for consulting services, including application development and deployment assistance and training related to our platform. Our professional services are not essential to the functionality of our platform because the platform is ready for the customer’s use immediately upon delivery and is not modified or customized in any manner.

Consulting services are billed under both time-and-material and fixed-fee arrangements. For standalone time-and-material contracts, we recognize revenue at contractually agreed upon billing rates applied to hours performed. For standalone fixed-fee contracts, we also recognize revenue as the work is performed using the proportional performance method of accounting. Training revenue is recognized when the associated training services are delivered. Training is also sold in the form of a subscription arrangement where a customer agrees to pay an annual fixed fee for a fixed number of users to have access to all of our training offerings during the year. Revenue from training subscription agreements is recognized ratably over the subscription period.

We defer recognition of revenue from work performed on pending contract modifications until the period in which the modifications are accepted and funding is approved by the customer. Costs of work performed on pending contract modifications are expensed as incurred.

Multiple Element Arrangements

Our multiple element arrangements are from SaaS subscriptions and term license subscriptions that are generally sold in combination with maintenance and support service and frequently with professional services.

SaaS Subscriptions

For multiple element arrangements involving SaaS subscriptions that include professional services in addition to the subscription to our platform, we evaluate each element to determine whether it represents a separate unit of accounting. Because there are third-party vendors who routinely sell and provide the same professional services to our customers, our professional services are deemed to have standalone value apart from the SaaS subscription. Additionally, we offer both SaaS subscriptions and professional services on a standalone basis. Professional services revenue is therefore accounted for separately from subscription fees and recognized as the professional services are performed. We allocate revenue to the elements based on the selling price hierarchy using vendor-specific objective evidence (“VSOE”) of selling price, third-party evidence (“TPE”) of selling price, or if neither exists, best estimated selling price (“BESP”). In cases where we do not have VSOE or TPE of the elements of our arrangements, we use BESP to allocate revenue. We determine BESP for a service by considering multiple factors including, but not limited to, evaluating the weighted average of actual sales prices and other factors such as gross margin objectives, pricing practices and growth strategy. Pricing practices taken into consideration include historic contractually stated prices, volume discounts where applicable and our price lists. While we believe we can make reliable estimates regarding these matters, these estimates are inherently subjective. Once the revenue is allocated to these elements, revenue is recognized as such services are provided.

Term License Subscriptions

For multiple element arrangements involving term license subscriptions, maintenance and support and professional services, we do not have VSOE of fair value for the maintenance and support. Our term license subscriptions are generally not sold on a standalone basis, and therefore, we have not established VSOE of fair value for the subscriptions. Consequently, for our bundled arrangements that include certain professional services, there are two undelivered elements for which VSOE of fair value has not been established and, therefore, we utilize the combined services approach and defer all revenue until the software has been delivered and the provision of all services has commenced. We then recognize the entire fee from the arrangement ratably over the remaining period of the arrangement, assuming all other software revenue recognition criteria have been met.

Deferred Revenue

Deferred revenue primarily consists of amounts billed or billable in advance of revenue recognition from our subscriptions, software, and support and professional services described above. Deferred revenue is recognized as the revenue recognition criteria are met.

Cost of Revenue

Cost of Subscriptions, Software and Support Revenue

Cost of subscriptions, software and support revenue consists primarily of fees paid to our third-party managed hosting providers and other third-party service providers, personnel costs, including payroll and benefits for our technology operations and customer support teams, and allocated facility costs and overhead.

Cost of Professional Services Revenue

Cost of professional services revenue includes all direct and indirect costs to deliver our professional services and training, including employee compensation for our global professional services and training personnel, travel costs, third-party contractor costs and allocated facility costs and overhead.

Concentration of Credit Risk

Our financial instruments that are exposed to concentration of credit risk consist primarily of cash and cash equivalents and trade accounts receivable. Deposits held with banks may exceed the amount of insurance provided on such deposits. We believe that the financial institutions that hold our cash deposits are financially sound and, accordingly, minimal credit risk exists with respect to these balances.

With regard to our customers, credit evaluation and account monitoring procedures are used to minimize the risk of loss. We believe that no additional credit risk beyond amounts provided for collection loss are inherent in accounts receivable. Revenue generated from government agencies represented 17.3% and 17.6% of our revenue for the three and six months ended June 30, 2019, respectively, of which the top three federal government agencies generated 6.3% and 7.0% of our revenue for the three and six months ended June 30, 2019, respectively. Additionally, 30.8% and 30.3% of our revenue during the three and six months ended June 30, 2019, respectively, was generated from foreign customers. Revenue generated from government agencies represented 20.1% and 16.5% of our revenue for the three and six months ended June 30, 2018, respectively, of which the top three federal government agencies generated 13.5% and 9.8% of our revenue for the three and six months ended June 30, 2018, respectively. Additionally, 28.1% and 29.6% of our revenue during the three and six months ended June 30, 2018, respectively, was generated from foreign customers.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are stated at realizable value, net of an allowance for doubtful accounts. The allowance for doubtful accounts is based on our assessment of the collectability of accounts. We regularly review the composition of the accounts receivable aging, historical bad debts, changes in payment patterns, customer creditworthiness and current economic trends. If the financial condition of our customers were to deteriorate, resulting in their inability to make required payments, additional provisions for doubtful accounts would be required and would increase bad debt expense. To date, our allowance and related bad debt write-offs have been nominal. There was no change in the allowance for doubtful accounts from December 31, 2018 to June 30, 2019.

Non-Trade Receivables

We record non-trade receivables to reflect amounts due for activities other than sales of subscriptions to our platform and professional services. Our non-trade receivables relate entirely to a receivable from our tenant improvement allowance. We received the entire tenant improvement allowance as of June 30, 2019, and therefore, there was no receivable balance remaining as of such date. The tenant improvement allowance receivable was $14.4 million as of December 31, 2018 and is classified within prepaid expenses and other current assets in the accompanying condensed consolidated balance sheets. We recognized our initial tenant improvement allowance receivable of $15.8 million related to our new headquarters once we took initial possession of the space in October 2018. We recognized additional tenant improvement allowance receivable of $2.6 million when we took possession of adjacent office space in February 2019.

Deferred Commissions

Deferred commissions are the incremental costs that are directly associated with subscription agreements with customers and consist of sales commissions paid to our direct sales force. Commissions are considered direct and incremental and as such are deferred and amortized over the terms of the related customer contracts consistent with the related revenue. Amortization of deferred commissions is included in sales and marketing expense in the accompanying condensed consolidated statements of operations. Commission expense was $4.7 million and $9.1 million for the three and six months ended June 30, 2019, respectively. Commission expense was $3.5 million and $6.2 million for the three and six months ended June 30, 2018, respectively.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. Significant additions or improvements extending the useful life of an asset are capitalized, while repairs and maintenance costs which do not significantly improve the related assets or extend their useful lives are charged to expense as incurred.

Asset Category	Useful Life (in years)
Computer software	3
Computer hardware	3
Equipment	5
Office furniture and fixtures	10
Leasehold improvements	Shorter of useful life of assets or lease term

Fair Value of Financial Instruments

The carrying amounts of our cash and cash equivalents, accounts receivable, accounts payable and accrued expenses approximate fair value as of June 30, 2019 and December 31, 2018 because of the relatively short duration of these instruments.

We use a three-tier fair value hierarchy to classify and disclose all assets and liabilities measured at fair value on a recurring basis, as well as assets and liabilities measured at fair value on a non-recurring basis, in periods subsequent to their initial measurement. The hierarchy requires us to use observable inputs when available, and to minimize the use of unobservable inputs when determining fair value. The three tiers are defined as follows:

- **Level 1.** Observable inputs based on unadjusted quoted prices in active markets for identical assets or liabilities;
- **Level 2.** Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and
- **Level 3.** Unobservable inputs for which there is little or no market data, which require us to develop our own assumptions.

Assets and Liabilities Measured at Fair Value on a Recurring Basis Using Significant Unobservable Inputs

There were no instruments measured at fair value during the three and six months ended June 30, 2019 and June 30, 2018.

Stock-Based Compensation

We account for stock-based compensation expense related to stock-based awards based on the estimated fair value of the award on the grant date. We calculate the fair value of stock options containing only a service condition using the Black-Scholes Option Pricing Model. The fair value of restricted stock units is based on the closing market price of our common stock on the Nasdaq Global Market on the date of grant. For service-based awards, stock-based compensation expense is recognized on a straight-line basis over the requisite service period. For performance-based awards, stock-based compensation expense is recognized using the accelerated attribution method, based on the probability of satisfying the performance condition. For awards that contain market conditions, compensation expense is measured using a Monte Carlo simulation and recognized using the accelerated attribution method over the derived service period based on the expected market performance as of the grant date. For restricted stock units, stock-based compensation expense is recognized on a straight-line basis over the requisite service period. We account for forfeitures as they occur, rather than estimating expected forfeitures.

Emerging Growth Company Status

We are an “emerging growth company” as defined in the Jumpstart Our Business Startups Act (the “JOBS Act”). We will remain an emerging growth company until December 31, 2019. After that date, we will no longer be an "emerging growth company" but will then be a "large accelerated filer," because over $700 million of our outstanding equity securities was held by non-affiliates as of June 30, 2019. The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to avail ourselves of this extended transition period and, as a result, we will not adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

Recent Accounting Pronouncements

Adopted

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments* (“ASU 2016-15”), which aims to reduce the existing diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. ASU 2016-15 will require adoption on a retrospective basis unless it is impracticable to apply, in which case we would be required to apply the amendments prospectively as of the earliest date practicable. ASU 2016-15 is effective for fiscal years beginning after December 15, 2018, and interim periods within fiscal years beginning after December 15, 2019. The adoption of ASU 2016-15 did not have an impact on our condensed consolidated financial statements for the three and six months ended June 30, 2019.

In February 2018, the FASB issued ASU No. 2018-02, *Income Statement-Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* ("ASU 2018-02"), which provides entities the option to reclassify to retained earnings tax effects related to items in accumulated other comprehensive income ("OCI") that the FASB refers to as having been stranded in accumulated OCI as a result of tax reform. ASU 2018-02 is effective for fiscal years beginning after December 15, 2018. The adoption of ASU 2018-02 did not have an impact on our condensed consolidated financial statements for the three and six months ended June 30, 2019.

Not Yet Adopted

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* ("ASC 606"), which provides new guidance for revenue recognition. ASC 606 provides that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASC 606 also requires improved disclosures to help users of financial statements better understand the nature, amount, timing, and uncertainty of revenue that is recognized. Entities have the option of using either a full retrospective or modified retrospective approach for the adoption of the standard. In March 2016, the FASB issued ASU No. 2016-08, *Principal Versus Agent Considerations (Reporting Revenue Gross Versus Net)* ("ASU 2016-08"), which clarifies implementation guidance on principal versus agent considerations in ASC 606. In April 2016, the FASB issued ASU No. 2016-10, *Identifying Performance Obligations and Licensing* ("ASU 2016-10"), which clarifies the identification of performance obligations and the licensing implementation guidance in ASC 606. In addition, in May 2016, the FASB issued ASU No. 2016-12, *Narrow-Scope Improvements and Practical Expedients* ("ASU 2016-12"), which clarifies the guidance on assessing collectibility, presentation of sales taxes, noncash consideration and completed contracts and contract modifications at transition. For public entities, the new standard is effective for annual periods and interim periods within those annual periods, beginning after December 15, 2017. For all other entities, the new standard is effective for annual periods beginning after December 15, 2018, and interim periods within those annual periods beginning after December 15, 2019. We have elected to avail ourselves of the JOBS Act extended transition period that permits us to defer adoption until January 1, 2019. In accordance with guidance, the new standard will be adopted in our Annual Report on Form 10-K for the fiscal year ending December 31, 2019 but will not be adopted in our Quarterly Reports on Form 10-Q to be filed during 2019.

The ASC 606 guidance allows two methods of adoption: retrospectively to each prior reporting period (full retrospective method) or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial application (modified retrospective method). We are going to adopt the new standard using the modified retrospective method.

We do not expect the new standard to have a material impact on the timing of revenue recognition related to our cloud-based subscriptions and standalone professional services. However, we expect the new standard to have a significant impact on the timing of revenue recognition related to our on-premise term license contracts. Under current industry-specific software revenue recognition guidance, we have historically concluded that we did not have VSOE of fair value of the undelivered services related to on-premise term license contracts, and accordingly, have recognized on-premise term license contracts and related services ratably over the contract term. Under this new standard, the requirement to have VSOE for undelivered services is eliminated. Therefore, we will be required to recognize a portion of revenue from the on-premise term license contracts upon delivery of the software.

In addition, we expect the new standard to impact our accounting for contract acquisition costs, both with respect to the amounts that will be capitalized as well as the period of amortization. Currently, we defer the direct and incremental commission costs to obtain a contract with a customer and amortize those costs over the term of the related customer contract consistent with the related revenue. Under the new standard, we will defer the incremental costs to obtain a contract with a customer. Therefore, the new standard will result in additional costs being capitalized, including fringe benefits. Under the new standard, initial incremental costs to obtain a contract will be amortized over the customer's estimated economic life of five years, which was calculated based on both qualitative and quantitative factors, such as product life cycles, contractual terms and customer attrition. Incremental contract costs paid relating to contract renewals will be deferred and amortized on a straight-line basis over the related renewal period. As a result, we expect the deferred commissions asset to increase and the related amortization expense in each reporting period to decrease under the new standard.

We are still in the process of quantifying the effects of the adoption of ASC 606 as well as continuing to evaluate the impact of the adoption of the standard on our consolidated financial statements, including our footnotes.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)* (“ASU 2016-02”), which was further clarified by ASU No. 2018-10, *Codification Improvements to Topic 842*, *Leases*, and ASU No. 2018-11, *Leases (Topic 842): Targeted Improvements*, both issued in July 2018. ASU 2016-02 requires companies to recognize on the balance sheet the assets and liabilities for the rights and obligations created by lease assets. The new standard also requires additional disclosure of qualitative and quantitative information about the amounts recorded in the financial statements related to lease agreements. Because we will lose "emerging growth company" status effective December 31, 2019, the new standard will be adopted in our Annual Report on Form 10-K for the year ending December 31, 2019. ASU 2016-02 requires a transition adoption election of either (1) a modified retrospective approach with periods prior to the adoption date being restated or (2) a prospective adoption approach with a cumulative-effect adjustment recognized to the opening balance of retained earnings on the adoption date with prior periods not restated. We are currently evaluating the impact the adoption of ASU 2016-02 will have on our condensed consolidated financial statements. We plan to adopt this standard using the prospective adoption approach and electing the practical expedients allowed under the standard. Although we are still evaluating the impact of the adoption of the standard on our condensed consolidated financial statements, we expect there will be a material increase to assets and liabilities related to the recognition of new right-of-use assets and lease liabilities on our balance sheet for leases currently classified as operating leases.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments-Credit Losses (Topic 326)* ("ASU 2016-13"), which requires entities to measure all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. This replaces the existing incurred loss model and is applicable to the measurement of credit losses on financial assets measured at amortized cost. This guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early application will be permitted for all entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. We are currently evaluating the impact that the standard will have on our consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"), which eliminates, modifies and adds disclosure requirements for fair value measurements. This guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early application will be permitted. We do not expect ASU 2018-13 to have a material impact on our consolidated financial statements.

3. Property and Equipment, net

Property and equipment, net consisted of the following as of June 30, 2019 and December 31, 2018 (in thousands):

	June 30, 2019	December 31, 2018
Leasehold improvements	$ 32,601	$ 9,958
Computer hardware	3,956	2,535
Office furniture and fixtures	3,910	649
Computer software	1,727	1,727
Equipment	134	138
	42,328	15,007
Less: accumulated depreciation	(5,505)	(7,468)
Property and equipment, net	$ 36,823	$ 7,539

Depreciation and amortization totaled $1.1 million and $1.9 million for the three and six months ended June 30, 2019, respectively. Depreciation and amortization totaled $0.7 million and $1.0 million for the three and six months ended June 30, 2018, respectively. During the three and six months ended June 30, 2019, we retired $3.2 million of leasehold improvements and $0.8 million of office furniture and fixtures and equipment in association with the relocation of our corporate headquarters. During the three and six months ended June 30, 2019, we recorded a loss on disposal of $0.1 million. During the three and six months ended June 30, 2018, we disposed of $0.1 million of fully depreciated computer hardware.

Property and equipment includes $3.7 million of capital leases at June 30, 2019. There were no assets acquired under capital lease agreements as of December 31, 2018. The property and equipment was acquired at June 30, 2019, and therefore no accumulated depreciation was recorded as of June 30, 2019. The leased assets are included in the office furniture and fixtures category in the table above.

4. Accrued Expenses

Accrued expenses consisted of the following as of June 30, 2019 and December 31, 2018 (in thousands):

	June 30, 2019	December 31, 2018
Accrued contract labor costs	$ 2,746	$ 3,128
Accrued leasehold improvement costs	2,406	—
Accrued hosting costs	1,914	579
Accrued reimbursable employee expenses	1,147	459
Accrued marketing and tradeshow expenses	812	229
Accrued computer hardware costs	670	—
Accrued audit and tax expenses	601	375
Accrued third party license fees	341	729
Other accrued expenses	1,438	1,965
Total	$ 12,075	$ 7,464

5. Debt

Line of Credit

In November 2017, we entered into a $20.0 million revolving line of credit with a lender. The facility matures in November 2022. We may elect whether amounts drawn on the revolving line of credit bear interest at a floating rate per annum equal to either the LIBOR or the prime rate plus an additional interest rate margin that is determined by the availability of the borrowings under the revolving line of credit. The additional interest rate margin will range from 2.00% to 2.50% in the case of LIBOR advances and from 1.00% to 1.50% in the case of prime rate advances. The revolving line of credit contains an unused facility fee in an amount between 0.15% and 0.25% of the average unused portion of the revolving line of credit, which is payable quarterly. The agreement contains certain customary affirmative and negative covenants and requires us to maintain (1) an adjusted quick ratio of at least 1.35 to 1.0 and (ii) minimum adjusted EBITDA, in the amounts and for the periods set forth in the agreement. Any amounts borrowed under the credit facility are collateralized by substantially all of our assets. We were in compliance with all covenants as of June 30, 2019. As of June 30, 2019, we had no outstanding borrowings under the revolving line of credit.

6. Income Taxes

The provision for income taxes is based upon the estimated annual effective tax rates for the year applied to the current period income before tax plus the tax effect of any significant unusual items, discrete events or changes in tax law. Our operating subsidiaries are exposed to statutory effective tax rates ranging from zero to approximately 32%. Fluctuations in the distribution of pre-tax income among our operating subsidiaries can lead to fluctuations of the effective tax rate in the condensed consolidated financial statements. For the three and six months ended June 30, 2019, the actual effective tax rates were (3.0)% and (1.5)%, respectively. For the three and six months ended June 30, 2018, the actual effective tax rates were (0.3)% and (1.2)%, respectively.

We assess uncertain tax positions in accordance with ASC 740-10, *Accounting for Uncertainties in Income Taxes*. As of June 30, 2019, our net unrecognized tax benefits totaled $1.0 million, of which the entire portion would favorably impact our effective tax rate in the period if recognized. We anticipate that the amount of reasonably possible unrecognized tax benefits that could decrease over the next 12 months due to the expiration of certain statutes of limitations and settlement of tax audits is not material to our consolidated financial statements.

We file income tax returns in the United States federal jurisdiction and in many states and foreign jurisdictions. The tax years 2015 through 2018 remain open to examination by the major taxing jurisdictions to which we are subject. We are not currently under examination by the Internal Revenue Service for any open tax years.

7. Stock-Based Compensation

In May 2017, our board of directors adopted, and our stockholders approved, the 2017 Equity Incentive Plan (the “2017 Plan”), which became effective as of the date of the final prospectus for our initial public offering. The 2017 Plan provides for the grant of incentive stock options to employees, and for the grant of nonstatutory stock options, restricted stock awards, restricted stock unit awards, stock appreciation rights, performance-based stock awards and other forms of equity compensation to employees, including officers, and to non-employee directors and consultants. We initially reserved 6,421,442 shares of Class A common stock for issuance under the 2017 Plan, which included 421,442 shares that remained available for issuance under our 2007 Stock Option Plan (the “2007 Plan”) at the time that the 2017 Plan became effective. The number of shares reserved under the 2017 Plan increases for any shares subject to outstanding awards originally granted under the 2007 Plan that expire or are forfeited prior to exercise. As a result of the adoption of the 2017 Plan, no further grants may be made under the 2007 Plan. As of June 30, 2019, there were 7,084,603 shares of Class A common stock reserved for issuance under the 2017 Plan, of which 4,913,160 were available to be issued.

The 2007 Plan provided for the grant of stock options to employees, directors, and officers. Stock options under the 2007 Plan are exercisable into shares of Class B common stock and generally expire ten years from the date of grant. Under the 2007 Plan, the exercise price of each award was established by the board of directors, but could not be less than the fair market value of a share of our common stock on the grant date. Stock options generally vest upon the satisfaction of both a service condition and a performance condition. The service condition is satisfied at various rates as determined by us, typically on an annual basis over five years. The performance condition required the occurrence of a qualifying event, defined as a change of control transaction or upon the completion of an initial public offering. The performance condition was satisfied upon the effectiveness of our initial public offering in May 2017.

We estimate the fair value of stock options containing only a service condition using the Black-Scholes Option Pricing Model, which requires the use of subjective assumptions, including the expected term of the option, the current price of the underlying stock, the expected stock price volatility, expected dividend yield and the risk-free interest rate for the expected term of the option. The expected term represents the period of time the stock options are expected to be outstanding. Due to the lack of sufficient historical exercise data to provide a reasonable basis upon which to otherwise estimate the expected term of the stock options, we use the simplified method to estimate the expected term for our stock options. Under the simplified method, the expected term of an option is presumed to be the mid-point between the vesting date and the end of the contractual term. Expected volatility is based on historical volatilities for publicly traded stock of comparable companies over the estimated expected term of the stock options. We assume no dividend yield because dividends are not expected to be paid in the near future, which is consistent with our history of not paying dividends.

In May 2019, our board of directors granted a stock option to purchase 700,000 shares of our Class A common stock to our Chief Executive Officer (the "2019 CEO Grant") under the 2017 Plan with an exercise price of $33.98 per share. The 2019 CEO Grant is eligible to vest based on the achievement of a stock price appreciation target of our Class A common stock. Specifically, the 2019 CEO Grant will vest when shares of our Class A common stock closes at or above $84.63 per share for a period equal to or greater than 90 calendar days or upon the occurrence of a change in control in which the value of our Class A common stock is equal to or greater than $84.63 per share within five years of the grant date. The fair value of the 2019 CEO Grant was determined using a Monte Carlo simulation. The fair value of the award at the grant date was $9.5 million and will be amortized over the derived service period of 2.6 years.

The following table summarizes the assumptions used to estimate the fair value of stock options granted during the three and six months ended June 30, 2019 and 2018:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Risk-free interest rate	2.1%	*	2.1%	*
Expected term (in years)	2.6	*	2.6	*
Expected volatility	55.0%	*	55.0%	*
Expected dividend yield	—%	*	—%	*

* Not applicable because no stock options were granted during the period

Stock Options

The following table summarizes the stock option activity for the six months ended June 30, 2019:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (in thousands)
January 1, 2019	5,021,068	$ 7.30	6.4	$ 97,440
Granted	700,000	33.98		
Exercised	(630,296)	3.15		18,852
Canceled	(44,140)	10.45		
Outstanding at June 30, 2019	5,046,632	11.49	6.2	124,021
Exercisable at June 30, 2019	3,207,972	7.12	6.0	92,872

The weighted average grant-date fair value of stock options granted during the six months ended June 30, 2019 was $13.57 per share. No stock options were granted during the six months ended June 30, 2018. The total fair value of stock options that vested during the six months ended June 30, 2019 and 2018 was $1.5 million and $1.6 million, respectively. As of June 30, 2019, the total compensation cost related to unvested stock options not yet recognized was $10.9 million, which will be recognized over a weighted average period of 2.4 years.

Restricted Stock Units

The following table summarizes the restricted stock unit activity for the six months ended June 30, 2019:

	Number of Shares	Weighted Average Grant Date Fair Value
Non-vested outstanding at January 1, 2019	1,175,049	$ 26.04
Granted	126,065	35.02
Vested	(284,690)	30.03
Canceled	(20,375)	28.70
Non-vested outstanding at June 30, 2019	996,049	25.99

As of June 30, 2019, total unrecognized compensation cost related to unvested restricted stock units was approximately $20.6 million, which will be recognized over a weighted average period of 2.3 years.

In November 2018, our board of directors approved the grant of 255,930 restricted stock units under the 2017 Plan at a fair value of $30.06 per share to our co-founders. The value of these awards at the grant date was $7.7 million and was amortized over the vesting periods. The restricted stock units vested during the three months ended March 31, 2019.

The following table summarizes the components of our stock-based compensation expense for the three and six months ended June 30, 2019 and 2018 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Stock-based compensation expense related to restricted stock units	$ 1,902	$ 1,017	$ 8,671	$ 1,911
Stock-based compensation expense related to stock options	695	1,073	1,059	2,327
Stock-based compensation expense related to the issuance of common stock to directors	92	116	184	208
Total stock-based compensation expense	$ 2,689	$ 2,206	$ 9,914	$ 4,446

Stock-based compensation expense for restricted stock units, stock options and issuances of common stock is included in the following line items in the accompanying condensed consolidated statements of operations for the three and six months ended June 30, 2019 and 2018 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Cost of revenue				
Subscriptions, software and support	$ 161	$ 107	$ 315	$ 217
Professional services	244	203	2,218	423
Operating expenses				
Sales and marketing	814	538	3,195	1,045
Research and development	435	342	2,550	733
General and administrative	1,035	1,016	1,636	2,028
Total stock-based compensation expense	$ 2,689	$ 2,206	$ 9,914	$ 4,446

8. Stockholders' Equity

As of June 30, 2019, we had authorized 500,000,000 shares of Class A common stock and 100,000,000 shares of Class B common stock, each with a par value of $0.0001 per share, of which 31,462,892 shares of Class A common stock and 33,374,676 shares of Class B common stock were issued and outstanding. The rights of the holders of Class A common stock and Class B common stock are identical, except with respect to voting and conversion rights. The holders of Class A common stock are entitled to one vote per share, and the holders of Class B common stock are entitled to ten votes per share, on all matters that are subject to stockholder vote. The holders of Class B common stock also have approval rights for certain corporate actions. Each share of Class B common stock may be converted into one share of Class A common stock at the option of its holder and will be automatically converted into one share of Class A common stock upon transfer thereof, subject to certain exceptions. In addition, upon the date on which the outstanding shares of Class B common stock represent less than 10% of the aggregate voting power of our capital stock, all outstanding shares of Class B common stock shall convert automatically into Class A common stock.

9. Basic and Diluted Loss per Common Share

The following securities have been excluded from the calculation of weighted average common shares outstanding because the effect is anti-dilutive or performance or market conditions had not been met at the end of the period:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Stock options	5,046,632	5,953,949	5,046,632	5,953,949
Restricted stock units	996,049	877,525	996,049	877,525

10. Commitments and Contingencies

Operating Leases

We lease office space and equipment under non-cancellable operating lease agreements which have various expiration dates through 2031 for our office space and various expiration dates through 2020 for our equipment.

In April 2018, we entered into a new lease agreement for a new headquarters in Tysons, Virginia. We took initial possession of the first phase of the new headquarters in October 2018 and began to recognize rent expense. We expect to start making recurring rental payments under the lease in the third quarter of 2020. Total payments committed under the lease amount to $87.2 million. In connection with the lease agreement, we also entered into a letter of credit of $9.4 million to fund the security deposit required by the lease.

The lease for the new headquarters contains a tenant improvement allowance of up to $18.4 million from the landlord. The tenant improvement allowance is accounted for as a lease incentive obligation and is amortized as a reduction to rent expense over the lease term. We recorded a lease incentive obligation when we took initial possession of the first phase of the new headquarters. We took initial possession of the second phase in February 2019 and recorded an additional lease incentive obligation. As of June 30, 2019, $1.4 million was included in other current liabilities and $16.0 million was included in deferred rent, net of current portion on the accompanying consolidated balance sheets. As of December 31, 2018, $1.2 million was included in other current liabilities and $14.4 million was included in deferred rent, net of current portion on the accompanying consolidated balance sheets.

Capital Leases

We lease certain office furniture and fixtures under non-cancellable capital lease agreements which have expiration dates in 2022. As of June 30, 2019, office furniture and fixtures acquired under capital lease agreements totaled $3.7 million. There were no assets acquired under capital lease agreements as of December 31, 2018.

A summary of our future minimum payments under non-cancellable operating and capital lease agreements by year as of June 30, 2019 is as follows (in thousands):

	Operating Leases	Capital Leases
Remainder of 2019	$ 2,111	$ 663
2020	3,375	1,325
2021	6,790	1,325
2022	6,938	663
2023	6,987	—
Thereafter	65,148	—
Total minimum lease payments	91,349	3,976
Less: amounts representing interest	—	(302)
Present value of lease obligations	$ 91,349	$ 3,674

We record rent expense using the total minimum rent commitment, amortized using the straight-line method over the term of the lease. The difference between monthly rental payments and recorded rent expense is charged to deferred rent. As of June 30, 2019 and December 31, 2018, deferred rent totaled $21.5 million and $17.4 million, respectively, and is included within other current liabilities and deferred rent, net of current portion on the accompanying condensed consolidated balance sheets. In addition to rental payments, certain leases require additional payments for real estate taxes, common area maintenance and insurance, which are expensed when incurred and not included in future minimum payments.

Total rent and lease expense was $2.4 million and $5.5 million for the three and six months ended June 30, 2019, respectively. Total rent and lease expense was $1.8 million and $3.8 million for the three and six months ended June 30, 2018, respectively.

Other Commitments

We also have entered into a non-cancellable agreement for the use of technology that is integral in the development of our software and pay annual royalty fees of $0.3 million.

Letters of Credit

As of each of June 30, 2019 and December 31, 2018, we had outstanding letters of credit totaling $10.5 million in connection with securing our leased office space. All letters of credit are secured by our borrowing arrangement as described in Note 5.

Legal

From time to time, we are subject to legal, regulatory and other proceedings and claims that arise in the ordinary course of business. There are no issues or resolution of any matters that are expected to have a material adverse impact on our consolidated financial statements.

11. Segment and Geographic Information

The following table summarizes revenue by geography for the three and six months ended June 30, 2019 and 2018 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Domestic	$ 46,295	$ 43,035	$ 88,178	$ 78,560
International	20,616	16,848	38,312	33,019
Total	$ 66,911	$ 59,883	$ 126,490	$ 111,579

With respect to geographic information, revenue is attributed to respective geographies based on the contracting address of the customer. Revenues from external customers attributed to the United Kingdom were 10.5% and 10.2% of our total revenue for the three and six months ended June 30, 2019, respectively. There were no individual foreign countries from which more than 10% of our total revenue was attributable for the three and six months ended June 30, 2018. Substantially all of our long-lived assets were held in the United States as of June 30, 2019 and December 31, 2018.

Item 2. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with (1) our condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q and (2) the audited consolidated financial statements and the related notes and management’s discussion and analysis of financial condition and results of operations for the year ended December 31, 2018 included in our Annual Report on Form 10-K, filed with the Securities and Exchange Commission, or SEC, on February 21, 2019.

This Quarterly Report on Form 10-Q contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements are often identified by the use of words such as “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “project,” “will,” “would” or the negative or plural of these words or similar expressions or variations, including statements regarding our future financial and operating performance, anticipated expansion of the usage of partners to perform professional services and our anticipated capital expenditures on our new headquarters. Such forward-looking statements are subject to a number of risks, uncertainties, assumptions and other factors that could cause actual results and the timing of certain events to differ materially from future results expressed or implied by the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified herein, and those discussed in the section titled “Risk Factors,” set forth in Part I, Item 1A of our Annual Report on Form 10-K filed with the SEC on February 21, 2019 and in our other filings with the SEC. You should not rely upon forward-looking statements as predictions of future events. Furthermore, such forward-looking statements speak only as of the date of this report. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements.

Overview

We provide a low-code software development platform that allows companies to rapidly build powerful business applications. The applications created on our platform help companies drive digital transformation and competitive differentiation.

With our platform, organizations can rapidly and easily design, build and implement powerful, enterprise-grade custom applications through our intuitive, visual interface with little or no coding required. Our customers have used applications built on our low-code platform to launch new business lines, automate vital employee workflows, manage complex trading platforms, accelerate drug development and build global procurement systems. With our platform, decision makers can reimagine their products, services, processes and customer interactions by removing much of the complexity and many of the challenges associated with traditional approaches to software development.

We have generated the majority of our revenue from sales of subscriptions, software and support, which include (1) SaaS subscriptions bundled with maintenance and support and hosting services, and (2) term license subscriptions bundled with maintenance and support.

Our subscription fees are based primarily on the number of users who access and utilize the applications built on our platform or, alternatively, non-user based single application licenses. Our customer contract terms generally vary from one to three years with most providing for payment in advance on an annual, quarterly or monthly basis. Due to the variability of our billing terms and the episodic nature of our customers purchasing additional subscriptions, we do not believe that changes in our deferred revenue in a given period are directly correlated with our revenue growth.

Since inception, we have invested in our professional services organization to help ensure that customers are able to build and deploy applications on our platform. We have several strategic partnerships, including with KPMG, PricewaterhouseCoopers and Deloitte, for them to refer customers to us and then to provide professional services directly to the customers using our platform. We intend to further grow our base of strategic partners to provide broader customer coverage and solution delivery capabilities. In addition, over time we expect professional services revenue as a percentage of total revenue to decline as we increasingly rely on strategic partners to help our customers deploy our software. We believe our investment in professional services, including strategic partners building their practices around Appian, will drive increased adoption of our platform.

Our customers include financial services, life sciences, government, telecommunications, media, energy, manufacturing and transportation organizations. Generally, our sales force targets its efforts to organizations with over 2,000 employees and $2 billion in annual revenue. Revenue from government agencies represented 17.3% and 17.6% of our total revenue in the three and six months ended June 30, 2019, respectively. Revenue from government agencies represented 20.1% and 16.5% of our total revenue in the three and six months ended June 30, 2018, respectively. No single end-customer accounted for more than 10% of our total revenue in the three and six months ended June 30, 2019 or June 30, 2018.

Our platform supports multiple languages to facilitate collaboration and address challenges in multi-national organizations. We offer our platform globally. In the three and six months ended June 30, 2019, 30.8% and 30.3%, respectively, of our total revenue was generated from customers outside of the United States. In the three and six months ended June 30, 2018, 28.1% and 29.6%, respectively, of our total revenue was generated from customers outside of the United States. As of June 30, 2019, we operated in 12 countries. We believe that we have a significant opportunity to grow our international footprint. We are investing in new geographies, including through investment in direct and indirect sales channels, professional services and customer support and implementation partners.

Recent Developments

In July 2019, we completed the move to our new headquarters in Tysons, Virginia.

Our Business Model

Our business model focuses on maximizing the lifetime value of customer relationships, which is a function of the duration of a customer's deployment of Appian as well as the price and number of subscriptions of Appian that a customer purchases. The costs we incur with respect to any customer may exceed revenue from that customer in earlier periods because we generally recognize costs associated with customer acquisition faster than we generate and recognize the associated revenue. We incur significant customer acquisition costs, including expenses associated with hiring new sales representatives, who generally take more than one year to become productive given the length of our sales cycle, and marketing costs, all of which, with the exception of sales commissions, are expensed as incurred.

The following are several key factors that affect our performance:

- ***Market Adoption of Our Platform.*** Our ability to grow our customer base and drive market adoption of our platform is affected by the pace at which organizations digitally transform. We expect that our revenue growth will be primarily driven by the pace of adoption and penetration of our platform. We offer a leading custom software development platform and intend to continue to invest to expand our customer base. The degree to which prospective customers recognize the need for low-code software that enables organizations to digitally transform, and subsequently allocate budget dollars to purchase our software, will drive our ability to acquire new customers and increase sales to existing customers, which, in turn, will affect our future financial performance.
- ***Growth of Our Customer Base.*** We believe we have a substantial opportunity to grow our customer base. We define a customer as an entity with an active subscription or active maintenance and support contract related to a perpetual software license as of the specified measurement date. To the extent we contract with one or more entities under common control, we count those entities as separate customers. We have aggressively invested, and intend to continue to invest, in our sales force in order to drive sales to new customers. In particular, we have recently made, and plan to continue to make, investments to enhance the expertise of our sales and marketing organization within our key industry verticals of financial services, life sciences and government. In addition, we have established relationships with strategic partners who work with organizations undergoing digital transformations. Our ability to continue to grow our customer base is dependent, in part, upon our ability to compete within the increasingly competitive markets in which we participate.

- ***Further Penetration of Existing Customers.*** Our sales force seeks to generate additional revenue from existing customers by adding new users to our platform. Many of our customers begin by building a single application and then grow to build dozens of applications on our platform. Generally, the development of new applications on our platform results in the expansion of our user base within an organization and a corresponding increase in revenue to us because we charge subscription fees on a per-user basis for the significant majority of our customer contracts. As a result of this "land and expand" strategy, we have generated significant additional revenue from our customer base. Our ability to increase sales to existing customers will depend on a number of factors, including the size of our sales force and professional services teams, customers’ level of satisfaction with our platform and professional services, pricing, economic conditions and our customers’ overall spending levels. We have also re-focused some of our professional services personnel to become customer success managers. Their role is to ensure the customer realizes value from our platform and support the "land and expand" strategy versus delivering billable hours.
- ***Mix of Subscription and Professional Services Revenue.*** We believe our professional services have driven customer success and facilitated the adoption of our platform by customers. During the initial period of deployment by a customer, we generally provide a greater amount of support in building applications and training than later in the deployment, with a typical engagement extending from two to six months. At the same time, many of our customers have historically purchased subscriptions only for a limited set of their total potential end users. As a result of these factors, the proportion of total revenue for a customer associated with professional services is relatively high during the initial deployment period. Over time, as the need for professional services associated with user deployments decreases and the number of end users increases, we expect the mix of total revenue to shift more toward subscription revenue in the long term. In addition, we intend to further grow our base of strategic partners to provide broader customer coverage and solution delivery capabilities. These partners perform professional services with respect to any new service contracts they sign with our customers. As the usage of partners expands, we expect the proportion of our total revenue from subscriptions to increase over time relative to professional services. For the three months ended June 30, 2019 and 2018, 58.7% and 55.2% of our revenue, respectively, was derived from sales of subscriptions, software and support, while the remaining 41.3% and 44.8%, respectively, was derived from the sale of professional services. For the six months ended June 30, 2019 and 2018, 58.6% and 53.8% of our revenue, respectively, was derived from sales of subscriptions, software and support, while the remaining 41.4% and 46.2%, respectively, was derived from the sale of professional services.
- ***Investments in Growth.*** We have made and plan to continue to make investments for long-term growth, including investment in our platform and infrastructure to continuously maximize the power and simplicity of the platform to meet the evolving needs of our customers and to take advantage of our market opportunity. We intend to continue to invest in sales and marketing, as we further expand our sales teams, increase our marketing activities and grow our international operations.

Key Metrics

We monitor the following metrics to help us measure and evaluate the effectiveness of our operations (dollars in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Subscription Revenue	$ 38,024	$ 27,036	$ 71,610	$ 52,524

	As of June 30,	
	2019	2018
Subscription Revenue Retention Rate	117 %	119 %

Subscription Revenue

Subscription revenue is a portion of our revenue contained in the subscriptions, software and support revenue line of our consolidated statements of operations, and includes (1) software as a service, or SaaS, subscriptions bundled with maintenance and support and hosting services, and (2) term license subscriptions bundled with maintenance and support. As we generally sell our software on a per-user basis, our subscription revenue for any customer is primarily determined by the number of users who access and utilize the applications built on our platform, as well as the price paid. We believe that increasing our subscription revenue is an indicator of the demand for our platform, the pace at which the market for our solutions is growing, the productivity of our sales force and strategic relationships in growing our customer base, and our ability to further penetrate our existing customer base.

Subscription Revenue Retention Rate

A key factor to our success is the renewal and expansion of subscription agreements with our existing customers. We calculate this metric over a set of customers who have been with us for at least one full year. To calculate our subscription revenue retention rate for a particular trailing 12-month period, we first establish the recurring subscription revenue for the previous trailing 12-month period. This effectively represents recurring dollars that we should expect in the current trailing 12-month period from the cohort of customers from the previous trailing 12-month period without any expansion or contraction. We subsequently measure the recurring subscription revenue in the current trailing 12-month period from the cohort of customers from the previous trailing 12-month period. Subscription revenue retention rate is then calculated by dividing the aggregate recurring subscription revenue in the current trailing 12-month period by the previous trailing 12-month period. This calculation includes the impact on our revenue from customer non-renewals, pricing changes and growth in the number of users on our platform. Our subscription revenue retention rate can fluctuate from period to period due to large customer contracts in any given period.

Key Components of Results of Operations

Revenue

We generate revenue primarily through sales of subscriptions to our platform, as well as professional services. We generally sell our software on a per-user basis. We generally bill customers and collect payment for subscriptions to our platform in advance on an annual, quarterly or monthly basis. In certain instances, we have had customers pay their entire contract value up front.

Our revenue is comprised of the following:

Subscriptions, Software and Support

Subscriptions, software and support revenue is primarily derived from:

- SaaS subscriptions bundled with maintenance and support and hosting services; and
- on-premises term license subscriptions bundled with maintenance and support.

Our maintenance and support agreements provide customers with the right to unspecified software upgrades, maintenance releases and patches released during the term of the maintenance and support agreement on a when-and-if-available basis, and rights to technical support. When our platform is deployed within a customer’s own data center or private cloud, it is installed on the customer’s infrastructure and generally offered as a term license. When our platform is delivered as a SaaS subscription, we handle its operational needs in third-party hosted data centers.

Professional Services

Our professional services revenue is comprised of fees for consulting services, including application development and deployment assistance and training related to our platform. Over time, as the need for professional services associated with user deployments decreases and the number of end users increases, we expect the mix of total revenue to shift more toward subscription revenue. We have several strategic partnerships, including with KPMG, PricewaterhouseCoopers and Deloitte. Our agreements with our strategic partners have indefinite terms and may be terminated for convenience by either party. We intend to further grow our base of strategic partners to provide broader customer coverage and solution delivery capabilities. These partners refer software subscription customers to us and, generally, perform professional services with respect to any new service contracts they originate, increasing our software subscription revenue without any change to our professional services revenue. As we expand the usage of partners, we expect professional services revenue to decline as a percentage of total revenue over time since our partners may perform professional services associated with software subscriptions that we sell.

Cost of Revenue

Subscriptions, Software and Support

Cost of subscriptions, software and support revenue consists primarily of fees paid to our third-party managed hosting providers and other third-party service providers, personnel costs, including payroll and benefits for our technology operations and customer support teams, and allocated facility costs and overhead. We expect cost of revenue to continue to increase in absolute dollars for the foreseeable future as our customer base grows.

Professional Services

Cost of professional services revenue includes all direct and indirect costs to deliver our professional services and training, including employee compensation for our global professional services and training personnel, third-party contractor costs, allocated facility costs and overhead, as well as the costs of billable expenses, such as travel and lodging. The unpredictability of the timing of entering into significant professional services agreements sold on a standalone basis may cause significant fluctuations in our quarterly financial results.

Gross Margin

Gross profit and gross margin, or gross profit as a percentage of total revenue, has been, and will continue to be, affected by various factors, including the mix of subscription, software and support revenue and professional services revenue. Subscription pricing, the costs associated with third-party hosting facilities, and the extent to which we expand our professional services to support future growth will impact our gross margins. Our gross margin may fluctuate from period to period based on the above factors.

Subscriptions, Software and Support Gross Margin. Subscriptions, software and support gross margin is primarily affected by the growth in our subscriptions, software and support revenue as compared to the growth in, and timing of, costs to support such revenue. We expect to continue to invest in the customer support and SaaS operations to support the growth in the business and the timing of those investments is expected to cause gross margins to fluctuate.

Professional Services Gross Margin. Professional services gross margin is affected by the growth in our professional services revenue as compared to the growth in, and timing of, the cost of our professional services organization as we continue to invest in the growth of our business. Professional services gross margin is also impacted by the ratable recognition of some of our professional services revenue as compared to the recognition of related costs of services in the period incurred, as well as the amount of services performed by subcontractors as opposed to internal resources. Our professional services gross margin is also impacted by the amount of services performed by partners as opposed to internal resources.

Operating Expenses

Operating expenses consist of sales and marketing, research and development and general and administrative expenses. Salaries, bonuses and other personnel-related costs are the most significant components of each of these expense categories.

Sales and Marketing Expense

Sales and marketing expense primarily includes personnel costs, including salaries, bonuses, commissions, stock-based compensation and other personnel costs related to sales teams. Additional expenses in this category include travel and entertainment, marketing and promotional events, marketing activities, subcontracting fees and allocated facility costs and overhead.

In order to continue to grow our business, geographical footprint and brand awareness, we expect to continue investing resources in sales and marketing by increasing the number of sales and account management teams. As a result, we expect sales and marketing expense to increase in absolute dollars as we continue to invest to acquire new customers and further expand usage of our platform within our existing customer base.

Research and Development Expense

Research and development expense consists primarily of personnel costs for our employees who develop and enhance our platform, including salaries, bonuses, stock-based compensation and other personnel costs. Also included are non-personnel costs such as subcontracting, consulting and professional fees to third party development resources, allocated facility costs, overhead and depreciation and amortization costs.

Our research and development efforts are focused on enhancing the speed and power of our software platform. We expect research and development expenses to continue to increase as they are critical to maintain and improve our quality of applications and our competitive position.

General and Administrative Expense

General and administrative expense consists primarily of personnel costs, including salaries, bonuses, stock-based compensation and other personnel costs for our administrative, legal, information technology, human resources, finance and accounting employees and executives. Additional expenses included in this category are non-personnel costs, such as travel-related expenses, contracting and professional fees, audit fees, tax services and legal fees, as well as insurance and other corporate expenses, along with allocated facility costs and overhead. We expect our general and administrative expense to increase in absolute dollars as we continue to support our growth and as a result of our becoming a public company.

Other Expense (Income)

Other Income, Net

Other income, net consists primarily of unrealized and realized gains and losses related to changes in foreign currency exchange rates and interest income on our cash and cash equivalents.

Interest Expense

Interest expense consists primarily of interest on our capital leases and debt, unused fees on our credit facility and commitment fees on our letters of credit.

Results of Operations

The following table sets forth our consolidated statement of operations data:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
	(in thousands)			
Consolidated Statement of Operations Data:				
Revenue:				
Subscriptions, software and support	$ 39,259	$ 33,047	$ 74,168	$ 59,999
Professional services	27,652	26,836	52,322	51,580
Total revenue	66,911	59,883	126,490	111,579
Cost of revenue:				
Subscriptions, software and support	4,036	2,824	7,621	5,452
Professional services	19,015	18,750	39,496	37,171
Total cost of revenue	23,051	21,574	47,117	42,623
Gross profit	43,860	38,309	79,373	68,956
Operating expenses:				
Sales and marketing	31,148	27,384	61,093	50,348
Research and development	12,765	10,785	26,721	20,655
General and administrative	9,261	8,425	18,277	16,485
Total operating expenses	53,174	46,594	106,091	87,488
Operating loss	(9,314)	(8,285)	(26,718)	(18,532)
Other (income) expense:				
Other (income) expense, net	(256)	2,593	(316)	1,675
Interest expense	69	54	140	67
Total other (income) expense	(187)	2,647	(176)	1,742
Loss before income taxes	(9,127)	(10,932)	(26,542)	(20,274)
Income tax expense	267	35	389	246
Net loss	$ (9,394)	$ (10,967)	$ (26,931)	$ (20,520)

The following table sets forth our consolidated statement of operations data expressed as a percentage of total revenue:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Consolidated Statement of Operations Data:				
Revenue:				
Subscriptions, software and support	58.7 %	55.2 %	58.6 %	53.8 %
Professional services	41.3	44.8	41.4	46.2
Total revenue	100.0	100.0	100.0	100.0
Cost of revenue:				
Subscriptions, software and support	6.0	4.7	6.0	4.9
Professional services	28.4	31.3	31.2	33.3
Total cost of revenue	34.4	36.0	37.2	38.2
Gross margin	65.6	64.0	62.8	61.8
Operating expenses:				
Sales and marketing	46.6	45.7	48.3	45.1
Research and development	19.1	18.0	21.1	18.5
General and administrative	13.8	14.1	14.4	14.8
Total operating expenses	79.5	77.8	83.8	78.4
Operating loss	(13.9)	(13.8)	(21.0)	(16.6)
Other (income) expense:				
Other (income) expense, net	(0.4)	4.3	(0.2)	1.5
Interest expense	0.1	0.1	0.1	0.1
Total other (income) expense	(0.3)	4.4	(0.1)	1.6
Loss before income taxes	(13.6)	(18.2)	(20.9)	(18.2)
Income tax expense	0.4	0.1	0.3	0.2
Net loss	(14.0)%	(18.3)%	(21.2)%	(18.4)%

Comparison of the Three Months Ended June 30, 2019 and 2018

Revenue

	Three Months Ended June 30,		% Change
	2019	2018	
	(dollars in thousands)		
Revenue			
Subscriptions, software and support	$ 39,259	$ 33,047	18.8 %
Professional services	27,652	26,836	3.0
Total revenue	$ 66,911	$ 59,883	11.7

Total revenue increased $7.0 million, or 11.7%, in the three months ended June 30, 2019 compared to the same period in 2018, due to an increase in our subscriptions, software and support revenue of $6.2 million and an increase in our professional services revenue of $0.8 million. The increase in subscriptions, software and support revenue was attributable to $6.5 million of revenue from expanded deployments and corresponding sales of additional subscriptions to existing customers and $4.1 million in sales of subscriptions to new customers, offset by a $4.4 million perpetual software license sold to a federal agency in the three months ended June 30, 2018. The increase in professional services revenue was due to $8.1 million in sales to new customers, offset by a $7.3 million decrease in revenue from existing customers.

Cost of Revenue

	Three Months Ended June 30,		% Change
	2019	2018	
	(dollars in thousands)		
Cost of revenue:			
Subscriptions, software and support	$ 4,036	$ 2,824	42.9 %
Professional services	19,015	18,750	1.4
Total cost of revenue	$ 23,051	$ 21,574	6.8
Subscriptions, software and support gross margin	89.7 %	91.5 %	
Professional services gross margin	31.2	30.1	
Total gross margin	65.5	64.0	

Cost of revenue increased $1.5 million, or 6.8%, in the three months ended June 30, 2019 compared to the same period in 2018, primarily due to a $0.9 million increase in professional services and product support personnel costs, a $0.7 million increase in other cost of revenue and a $0.5 million increase in facility and overhead costs, offset by a $0.6 million decrease in contractor costs. Personnel costs increased due to an increase in professional services and product support staff personnel headcount of 13.8% from June 30, 2018 to June 30, 2019 and a $0.1 million increase in stock-based compensation expense during the three months ended June 30, 2019. The increase in other cost of revenue was due to increased hosting costs as sales of our cloud offering increased in the three months ended June 30, 2019. Facility and overhead costs increased to support our personnel growth. Contractor costs decreased in the three months ended June 30, 2019 compared to the same period in 2018 because of a decrease in the average hourly rate for subcontractors.

Subscriptions, software and support gross margin decreased to 89.7% in the three months ended June 30, 2019 compared to 91.5% in the same period in 2018 due to the sale of a $4.4 million perpetual software license in the three months ended June 30, 2018 and increased hosting costs during the three months ended June 30, 2019 as sales of our cloud offering increased and became a larger proportion of our overall subscription, software and support revenue. There is minimal cost of revenue for our perpetual software revenue, and therefore, our subscriptions, software and support gross margin was higher during the three months ended June 30, 2018. Professional services gross margin increased to 31.2% in the three months ended June 30, 2019 compared to 30.1% in the same period in 2018 due to an increase in the utilization rate of professional services resources as compared to the three months ended June 30, 2018. The gross margin of professional services was also positively impacted by the decrease in the average hourly rate for subcontractors. Due to the higher percentage of subscriptions, software and support revenue for the three months ended June 30, 2019 as compared to the three months ended June 30, 2018 and the increase in professional services margin, gross margin increased to 65.5% in the three months ended June 30, 2019 compared to 64.0% in the same period in 2018.

Sales and Marketing Expense

	Three Months Ended June 30,		% Change
	2019	2018	
	(dollars in thousands)		
Sales and marketing	$ 31,148	$ 27,384	13.7 %
% of revenue	46.6 %	45.7 %	

Sales and marketing expense increased $3.8 million, or 13.7%, in the three months ended June 30, 2019 compared to the same period in 2018, primarily due to a $2.5 million increase in sales and marketing personnel costs, a $0.6 million increase in marketing costs, a $0.5 million increase in professional fees and a $0.2 million increase in facility and overhead costs.

Personnel costs increased due to an increase in sales and marketing personnel headcount by 9.9% from June 30, 2018 to June 30, 2019, increased sales commissions driven by our revenue growth and a $0.3 million increase in stock-based compensation expense during the three months ended June 30, 2019. Marketing costs increased due to increased costs for our annual user conference, Appian World, as well as a rise in marketing event sponsorship and attendance. Professional fees increased due to an increase in consulting fees to support our ongoing marketing events and activities. Facility and overhead costs increased to support our personnel growth.

Research and Development Expense

	Three Months Ended June 30,		% Change
	2019	2018	
	(dollars in thousands)		
Research and development	$ 12,765	$ 10,785	18.4 %
% of revenue	19.1 %	18.0 %	

Research and development expense increased $2.0 million, or 18.4%, in the three months ended June 30, 2019 compared to the same period in 2018, primarily due to a $1.3 million increase in research and development personnel costs, a $0.6 million increase in facility and overhead costs and a $0.1 million increase in professional fees. Personnel costs increased due to an increase in research and development personnel headcount by 24.4% from June 30, 2018 to June 30, 2019 and a $0.1 million increase in stock-based compensation expense during the three months ended June 30, 2019. Facility and overhead costs increased to support our personnel growth. Professional fees increased due to an increase in consulting fees to support the development and enhancement of our platform.

General and Administrative Expense

	Three Months Ended June 30,		% Change
	2019	2018	
	(dollars in thousands)		
General and administrative expense	$ 9,261	$ 8,425	9.9 %
% of revenue	13.8 %	14.1 %	

General and administrative expense increased $0.8 million, or 9.9%, in the three months ended June 30, 2019 compared to the same period in 2018, primarily due to a $0.5 million increase in general and administrative personnel costs, a $0.2 million increase in professional fees and a $0.1 million increase in facility and overhead costs. Personnel costs increased due to an increase in general and administrative personnel headcount by 25.9% from June 30, 2018 to June 30, 2019 in order to support the additional requirements of being a public company. Facility and overhead costs increased to support our personnel growth. Professional fees increased due to the use of consulting services to support our back-office functions.

Other (Income) Expense, Net

	Three Months Ended June 30,	
	2019	2018
	(dollars in thousands)	
Other (income) expense, net	$ (256)	$ 2,593
% of revenue	(0.4)%	4.3 %

Other (income) expense, net increased by $2.8 million in the three months ended June 30, 2019 compared to the same period in 2018, primarily due to $0.1 million in foreign exchange gain in the three months ended June 30, 2019 compared to $2.7 million in foreign exchange loss in the three months ended June 30, 2018. The increase in foreign exchange gain was primarily due to currency fluctuations of the British Pound Sterling, Euro, Australian dollar and Swiss Franc versus the U.S.

dollar during the three months ended June 30, 2019 compared to the same period in 2018. There was also a $0.2 million increase in interest income in the three months ended June 30, 2019 compared to the same period in 2018, offset by $0.1 million in loss on the disposal of equipment during the three months ended June 30, 2019.

Interest Expense

	Three Months Ended June 30,		% Change
	2019	2018	
	(dollars in thousands)		
Interest expense	$ 69	$ 54	27.8 %
% of revenue	0.1 %	0.1 %	

Interest expense remained consistent in the three months ended June 30, 2019 compared to the same period in 2018.

Comparison of the Six Months Ended June 30, 2019 and 2018

Revenue

	Six Months Ended June 30,		% Change
	2019	2018	
	(dollars in thousands)		
Revenue			
Subscriptions, software and support	$ 74,168	$ 59,999	23.6 %
Professional services	52,322	51,580	1.4
Total revenue	$ 126,490	$ 111,579	13.4

Total revenue increased $14.9 million, or 13.4%, in the six months ended June 30, 2019 compared to the same period in 2018, due to an increase in our subscriptions, software and support revenue of $14.2 million and an increase in our professional services revenue of $0.7 million. The increase in subscriptions, software and support revenue was attributable to $12.3 million of revenue from expanded deployments and corresponding sales of additional subscriptions to existing customers and $6.3 million in sales of subscriptions to new customers, offset by a $4.4 million perpetual software license sold to a federal agency in the six months ended June 30, 2018. The increase in professional services revenue was due to $12.3 million in sales to new customers, offset by $11.6 million less revenue from existing customers.

Cost of Revenue

	Six Months Ended June 30,		% Change
	2019	2018	
	(dollars in thousands)		
Cost of revenue:			
Subscriptions, software and support	$ 7,621	$ 5,452	39.8 %
Professional services	39,496	37,171	6.3
Total cost of revenue	$ 47,117	$ 42,623	10.5
Subscriptions, software and support gross margin	89.7 %	90.9 %	
Professional services gross margin	24.5	27.9	
Total gross margin	62.8	61.8	

Cost of revenue increased $4.5 million, or 10.5%, in the six months ended June 30, 2019 compared to the same period in 2018, primarily due to a $4.2 million increase in professional services and product support personnel costs, a $1.2 million increase in other cost of revenue and a $1.1 million increase in facility and overhead costs, offset by a $1.8 million decrease in contractor costs and a $0.2 million decrease in billable expenses. Personnel costs increased due to an increase in professional services and product support staff personnel headcount of 13.8% from June 30, 2018 to June 30, 2019 and a $1.9 million increase in stock-based compensation expense during the six months ended June 30, 2019 due to the vesting of restricted stock units granted to our co-founders in the three months ended December 31, 2018. These restricted stock units vested in the three months ended March 31, 2019. The increase in other cost of revenue was due to increased hosting costs as sales of our cloud offering increased in the six months ended June 30, 2019. Facility and overhead costs increased to support our personnel growth. Contractor costs decreased in the six months ended June 30, 2019 compared to the same period in 2018 because of a decrease in the average hourly rate for subcontractors. Billable expenses decreased in the six months ended June 30, 2019 compared to the same period in 2018 because of a slight decrease in the utilization rate of professional services resources.

Subscriptions, software and support gross margin decreased to 89.7% in the six months ended June 30, 2019 compared to 90.9% in the same period in 2018 due to the sale of a $4.4 million perpetual software license in the six months ended June 30, 2018 and increased hosting costs as sales of our cloud offering increased and became a larger proportion of our overall subscription, software and support revenue. There is minimal cost of revenue for our perpetual software revenue, and therefore, our subscriptions, software and support gross margin was higher during the six months ended June 30, 2018. Professional services gross margin decreased to 24.5% in the six months ended June 30, 2019 compared to 27.9% in the same period in 2018 due to a $1.9 million increase in stock-based compensation expense during the six months ended June 30, 2019 due to the vesting of restricted stock units granted to our co-founders. There was also an increase in the use of customer success managers during the six months ended June 30, 2019 compared to the same period in 2018. To a lesser degree, the gross margin of our professional services revenue for the six months ended June 30, 2019 was also negatively impacted by a slight decrease in the utilization rate of professional services resources as compared to the six months ended June 30, 2018 due to an increase in the usage of our partners for professional service engagements. Due to the higher percentage of subscriptions, software and support revenue for the six months ended June 30, 2019 as compared to the six months ended June 30, 2018, gross margin increased to 62.8% in the six months ended June 30, 2019 compared to 61.8% in the same period in 2018.

Sales and Marketing Expense

	Six Months Ended June 30,		% Change
	2019	2018	
	(dollars in thousands)		
Sales and marketing	61,093	50,348	21.3 %
% of revenue	48.3 %	45.1 %	

Sales and marketing expense increased $10.7 million, or 21.3%, in the six months ended June 30, 2019 compared to the same period in 2018, primarily due to a $7.7 million increase in sales and marketing personnel costs, a $1.5 million increase in facility and overhead costs, a $0.8 million increase in marketing costs and a $0.7 million increase in professional fees. Personnel costs increased due to an increase in sales and marketing personnel headcount by 9.9% from June 30, 2018 to June 30, 2019, increased sales commissions driven by our revenue growth and a $2.2 million increase in stock-based compensation expense during the six months ended June 30, 2019 due to the vesting of restricted stock units granted to our co-founders in the three months ended December 31, 2018. These restricted stock units vested in the three months ended March 31, 2019. Facility and overhead costs increased to support our personnel growth. Marketing costs increased due to increased costs for our annual user conference, Appian World, as well as a rise in marketing event sponsorship and attendance. Professional fees increased due to an increase in consulting fees to support our ongoing marketing events and activities.

Research and Development Expense

	Six Months Ended June 30,		% Change
	2019	2018	
	(dollars in thousands)		
Research and development	$ 26,721	$ 20,655	29.4 %
% of revenue	21.1 %	18.5 %	

Research and development expense increased $6.1 million, or 29.4%, in the six months ended June 30, 2019 compared to the same period in 2018, primarily due to a $4.8 million increase in research and development personnel costs, a $1.2 million increase in facility and overhead costs and a $0.1 million increase in professional fees. Personnel costs increased due to an increase in research and development personnel headcount by 24.4% from June 30, 2018 to June 30, 2019, and a $1.8 million increase in stock-based compensation expense during the six months ended June 30, 2019 due to the vesting of restricted stock units granted to our co-founders in the three months ended December 31, 2018. These restricted stock units vested in the three months ended March 31, 2019. Facility and overhead costs increased to support our personnel growth. Professional fees increased due to an increase in consulting fees to support the development and enhancement of our platform.

General and Administrative Expense

	Six Months Ended June 30,		% Change
	2019	2018	
	(dollars in thousands)		
General and administrative expense	$ 18,277	$ 16,485	10.9 %
% of revenue	14.4 %	14.8 %	

General and administrative expense increased $1.8 million, or 10.9%, in the six months ended June 30, 2019 compared to the same period in 2018, primarily due to a $0.9 million increase in general and administrative personnel costs, a $0.8 million increase in facility and overhead costs and a $0.1 million increase in professional fees. Personnel costs increased due to an increase in general and administrative personnel headcount by 25.9% from June 30, 2018 to June 30, 2019 in order to support the additional requirements of being a public company, offset by a $0.4 million decrease in stock-based compensation expense during the six months ended June 30, 2019. Stock-based compensation expense decreased during the six months ended June 30, 2019 due to the vesting of an option to purchase 1,828,080 shares of our Class A common stock in August 2018. Prior to the vesting of the option, we recorded approximately $0.4 million in stock-based compensation expense on a quarterly basis. Facility and overhead costs increased to support our personnel growth. Professional fees increased due to the use of consulting services to support our back-office functions.

Other (Income) Expense, Net

	Six Months Ended June 30,	
	2019	2018
	(dollars in thousands)	
Other (income) expense, net	$ (316)	$ 1,675
% of revenue	(0.2)%	1.5 %

Other (income) expense, net increased by $2.0 million in the six months ended June 30, 2019 compared to the same period in 2018, primarily due to $0.2 million in foreign exchange loss in the six months ended June 30, 2019 compared to $1.9 million in foreign exchange loss in the six months ended June 30, 2018. The decrease in foreign exchange loss was primarily due to currency fluctuations of the British Pound Sterling, Euro, Australian dollar and Swiss Franc versus the U.S. dollar during the six months ended June 30, 2019 compared to the same period in 2018. There was also a $0.4 million increase in interest income in the six months ended June 30, 2019 compared to the same period in 2018, offset by $0.1 million in loss on the disposal of equipment during the six months ended June 30, 2019.

Interest Expense

	Six Months Ended June 30,		% Change
	2019	2018	
	(dollars in thousands)		
Interest expense	$ 140	$ 67	109.0 %
% of revenue	0.1 %	0.1 %	

Interest expense increased by $0.1 million in the six months ended June 30, 2019 compared to the same period in 2018, primarily due to commitment fees on the letter of credit to fund the security deposit required by the lease for our new headquarters.

Liquidity and Capital Resources

As of June 30, 2019, we had $81.1 million of cash and cash equivalents.

We believe that our existing cash and cash equivalents, together with any positive cash flows from operations and available borrowings under our line of credit, will be sufficient to support working capital and capital expenditure requirements for at least the next 12 months. Our future capital requirements will depend on many factors, including our growth rate, the timing and extent of spending to support research and development efforts, the expansion of sales and marketing activities, particularly internationally, and the introduction of new and enhanced products and functions, platform enhancements and professional services offerings, the level of market acceptance of our applications and spending on our new headquarters. In the event that additional financing is required from outside sources, we may be unable to raise the funds on acceptable terms, if at all. To the extent existing cash and cash equivalents and investments and cash from operations are not sufficient to fund future activities, we may need to raise additional funds. We may seek to raise additional funds through equity, equity-linked or debt financings. If we raise additional funds through the incurrence of indebtedness, such indebtedness may have rights that are senior to holders of our equity securities and could contain covenants that restrict operations. Any additional equity financing may be dilutive to our existing stockholders. Although we are not currently a party to any agreement or letter of intent with respect to potential investments in, or acquisitions of, complementary businesses, services or technologies, we may enter into these types of arrangements in the future, which could also require us to seek additional equity financing, incur indebtedness, or use cash resources. We have no present understandings, commitments or agreements to enter into any such acquisitions. If we are unable to raise additional capital when desired, our business, operating results and financial condition could be adversely affected.

The following table shows a summary of our cash flows for the six months ended June 30, 2019 and 2018:

	Six Months Ended June 30,	
	2019	2018
	(in thousands)	
Cash used provided by (used in) operating activities	$ 11,925	$ (23,616)
Cash used in investing activities	(27,689)	(1,593)
Cash provided by financing activities	1,987	2,072

Sources of Funds

We have financed our operations in large part with equity and debt financing arrangements, including net proceeds of $77.8 million from our initial public offering in May 2017 and net proceeds of $57.8 million from our underwritten public offering in August 2018, as well as through sales of software and professional services and borrowings under our credit facilities. We also financed $3.7 million of office furniture and fixtures and expect to finance approximately $1.0 million of equipment, both associated with the build-out of our new headquarters.

As of June 30, 2019, we had no outstanding borrowings. In November 2017, we entered into a $20.0 million revolving line of credit with a lender. The facility matures in November 2022. We may elect whether amounts drawn on the revolving line of credit bear interest at a floating rate per annum equal to either the LIBOR or the prime rate plus an additional interest rate margin that is determined by the availability of borrowings under the revolving line of credit. The additional interest rate margin will range from 2.00% to 2.50% in the case of LIBOR advances and from 1.00% to 1.50% in the case of prime rate advances. The revolving line of credit contains an unused facility fee in an amount between 0.15% and 0.25% of the average unused portion of the revolving line of credit, which is payable quarterly. The agreement contains certain customary affirmative and negative covenants and requires us to maintain (1) an adjusted quick ratio of at least 1.35 to 1.0 and (ii) minimum adjusted EBITDA in the amounts and for the periods set forth in the agreement. Any amounts borrowed under the credit facility are collateralized by substantially all of our assets. We were in compliance with all covenants as of June 30, 2019.

Use of Funds

Our principal uses of cash are funding operations and other working capital requirements. Over the past several years, revenue has increased significantly from year to year and, as a result, cash flows from customer collections have increased. However, operating expenses have also increased as we have invested in growing our business. During 2018 and 2019, our uses of cash included the build out of our new headquarters. In 2019, we expect to spend approximately $20.0 million above the $18.4 million tenant improvement allowance provided by the landlord for this build out. This estimated spend includes $3.7 million of furniture and fixtures that has been financed, and an additional $1.0 million of equipment that we expect to finance. For the six months ended June 30, 2019, substantially all of the $27.7 million of cash used in investing activities was related to the build out. We expect our remaining build out expenditures to be approximately $5.0 million.

Historical Cash Flows

Operating Activities

For the six months ended June 30, 2019, net cash provided by operating activities of $11.9 million consisted of a net loss of $26.9 million, offset by $12.0 million in adjustments for non-cash items and $26.8 million of cash provided by changes in working capital. Adjustments for non-cash items consisted of stock-based compensation of $9.9 million, depreciation and amortization expense of $1.9 million, a loss on disposal of equipment of $0.1 million and bad debt expense of $0.1 million. The increase in cash and cash equivalents resulting from changes in working capital primarily consisted of a $13.4 million decrease in prepaid expenses and other assets, primarily due to a decrease in the non-trade receivable resulting from our tenant improvement allowance. In accordance with accounting principles generally accepted in the United States of America, or U.S. GAAP, the $17.0 million of tenant improvement allowance reimbursements received during the six months ended June 30, 2019 are a source of cash in operating activities, whereas the capital expenditures are recorded as cash used in investing activities. There was also a $8.9 million decrease in accounts receivable, due to increased cash collections during the six months ended June 30, 2019, and a $5.5 million increase in accounts payable and accrued expenses, primarily due to the timing of payments. There was also a $4.6 million increase in deferred rent, non-current, as a result of taking initial possession of the second phase of our new headquarters in February 2019 and recording an additional lease incentive obligation. There was also a $0.2 million increase in deferred revenue, as a result of increased subscription sales. These increases were partially offset by a $3.2 million decrease in accrued compensation and related benefits, primarily due to a decrease in accrued vacation expense because of our new paid-time off policy, which took effect on January 1, 2019. There was also a $2.3 million increase in deferred commissions due to increased sales during the six months ended June 30, 2019 and a $0.3 million decrease in other current liabilities.

For the six months ended June 30, 2018, net cash used in operating activities of $23.6 million consisted of a net loss of $20.5 million and $8.6 million of cash used in changes in working capital, offset by $5.5 million in adjustments for non-cash items. Adjustments for non-cash items consisted of stock-based compensation of $4.4 million, depreciation and amortization expense of $1.0 million and a provision for deferred income taxes of $0.1 million. The decrease in cash and cash equivalents resulting from changes in working capital primarily consisted of a $9.1 million increase in accounts receivable, due to the timing of billings and collections. The timing of billings and collections was affected by the implementation of a new enterprise resource planning, or ERP, system during the second quarter of 2018. We converted less accounts receivable into cash collections during the six months ended June 30, 2018 than the six months ended June 30, 2017. There was also a $3.1 million increase in deferred commissions due to increased sales in the three months ended June 30, 2018 and a decrease in deferred revenue of $1.4 million, as a result of decreased subscription sales in the three months ended June 30, 2018 as compared to the three months ended December 31, 2017, which is historically our quarter with the highest percentage of subscription sales.

There was also a $1.2 million decrease in deferred rent, non-current and a $0.3 million increase in prepaid expenses and other assets. These decreases were partially offset by a $3.5 million increase in accounts payable and accrued expenses, primarily due to the timing of payments, a $2.0 million increase in accrued compensation and related benefits, primarily due to an increase in accrued vacation and a $1.0 million increase in other current liabilities.

Investing Activities

For the six months ended June 30, 2019, net cash used in investing activities was $27.7 million, for the build-out of our new headquarters and the purchase of property and equipment. For the six months ended June 30, 2018, net cash used in investing activities was $1.6 million, for the purchase of property and equipment.

Financing Activities

For the six months ended June 30, 2019 and 2018, net cash provided by financing activities was $2.0 million and $2.1 million, respectively, consisting of proceeds received from stock option exercises.

Contractual Obligations and Commitments

In June 2019, we entered into a capital lease for the acquisition of office furniture and fixtures in our new headquarters. The lease term is 36 months and our total obligation is $4.0 million over the term of the lease.

Other than as described above, as of June 30, 2019, there was no material change in our contractual obligations and commitments from those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on February 21, 2019.

Off-Balance Sheet Arrangements

As of June 30, 2019, we did not have any relationships with unconsolidated entities or financial partnerships, including entities sometimes referred to as structured finance or special purpose entities, that were established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. We do not engage in off-balance sheet financing arrangements. In addition, we do not engage in trading activities involving non-exchange traded contracts. We believe, therefore, that we are not materially exposed to any financing, liquidity, market or credit risk that could arise if we had engaged in these relationships.

Critical Accounting Policies and Estimates

The preparation of our condensed consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and judgments that affect the amounts reported in those financial statements and accompanying notes. Although we believe that the estimates we use are reasonable, due to the inherent uncertainty involved in making those estimates, actual results reported in future periods could differ from those estimates. Significant estimates embedded in the consolidated financial statements for the periods presented include revenue recognition, stock-based compensation and income taxes.

There have been no material changes in our critical accounting policies from those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on February 21, 2019.

Recent Accounting Pronouncements

See Note 2 to the unaudited condensed consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q for a discussion of recent accounting pronouncements.

JOBS Act Transition Period

In April 2012, the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, was enacted. Section 107(b) of the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to take advantage of the extended transition period to comply with new or revised accounting standards and to adopt certain of the reduced disclosure requirements available to emerging growth companies. As a result of the accounting standards election, we will not be subject to the same implementation timing for new or revised accounting standards as other public companies that are not emerging growth companies which may make comparison of our financials to those of other public companies more difficult. We will remain an emerging growth company until December 31, 2019. After that date, we will no longer be an "emerging growth company" but will then be a "large accelerated filer," because over $700 million of our outstanding equity securities was held by non-affiliates as of June 30, 2019.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

We are exposed to market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily the result of fluctuations in interest rates and foreign currency exchange rates.

Interest Rate Risk

We had cash and cash equivalents of $81.1 million as of June 30, 2019, which consisted of cash in readily available checking accounts and overnight repurchase investments. These securities are not dependent on interest rate fluctuations that may cause the principal amount of these assets to fluctuate.

At June 30, 2019, we had no outstanding borrowings.

Foreign Currency Exchange Risk

Our reporting currency is the U.S. dollar. Due to our international operations, we have foreign currency risks related to revenue and operating expenses denominated in currencies other than the U.S. dollar, primarily the British Pound Sterling, Euro, Australian Dollar and Swiss Franc. Our sales contracts are primarily denominated in the local currency of the customer making the purchase. In addition, a portion of operating expenses are incurred outside the United States and are denominated in foreign currencies. Decreases in the relative value of the U.S. dollar to other currencies may negatively affect revenue and other operating results as expressed in U.S. dollars. We do not believe that an immediate 10% increase or decrease in the relative value of the U.S. dollar to other currencies would have a material effect on operating results.

We have experienced and will continue to experience fluctuations in net loss as a result of transaction gains or losses related to remeasuring certain current asset and current liability balances that are denominated in currencies other than the functional currency of the entities in which they are recorded. We have not engaged in the hedging of foreign currency transactions to date, although we may choose to do so in the future.

Item 4. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

We maintain “disclosure controls and procedures,” as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Exchange Act that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to our management, including our principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

Our management, with the participation of our Chief Executive Officer and our Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of June 30, 2019. Based on the evaluation of our disclosure controls and procedures as of June 30, 2019, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the period covered by this Quarterly Report on Form 10-Q that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, believes that our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving their objectives and are effective at the reasonable assurance level. However, our management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the controls. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

PART II—OTHER INFORMATION

Item 1. LEGAL PROCEEDINGS.

From time to time we may become involved in legal proceedings or be subject to claims arising in the ordinary course of our business. We are not presently a party to any legal proceedings that, if determined adversely to us, would individually or taken together have a material adverse effect on our business, operating results, financial condition or cash flows. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Item 1A. RISK FACTORS.

Our business is subject to risks and events that, if they occur, could adversely affect our financial condition and results of operations and the trading price of our securities. In addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the factors described in "Part I, Item 1A. Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on February 21, 2019. There have been no material changes to the risk factors described in that report.

Item 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS.

a. Recent Sales of Unregistered Equity Securities

Not applicable.

b. Use of Proceeds

Not applicable.

c. Issuer Purchases of Equity Securities

Not applicable.

Item 3. DEFAULTS UPON SENIOR SECURITIES.

Not applicable.

Item 4. MINE SAFETY DISCLOSURES.

Not applicable.

Item 5. OTHER INFORMATION.

Not applicable.

ITEM 6. EXHIBITS.

Exhibit Number	Description
3.1(1)	Amended and Restated Certificate of Incorporation of Appian Corporation.
3.2(2)	Amended and Restated Bylaws of Appian Corporation.
4.1 (3)	Form of Class A common stock certificate of Appian Corporation.
31.1#	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2#	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1#*	Certifications of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document - The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

1. Previously filed as Exhibit 3.2 to Amendment No. 3 to the Registrant's Registration Statement on Form S-1 (File No. 333-217510), filed with the Securities and Exchange Commission on May 12, 2017, and incorporated herein by reference.
2. Previously filed as Exhibit 3.4 to Amendment No. 2 to the Registrant’s Registration Statement on Form S-1 (File No. 333-217510), filed with the Securities and Exchange Commission on May 10, 2017, and incorporated herein by reference.
3. Previously filed as Exhibit 4.1 to Amendment No. 3 to the Registrant’s Registration Statement on Form S-1 (File No. 333-217510), filed with the Securities and Exchange Commission on May 12, 2017, and incorporated herein by reference.

Filed herewith.

* This certification is deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

APPIAN CORPORATION

August 8, 2019	By:	/s/ Matthew Calkins
		Name: Matthew Calkins
		Title: Chief Executive Officer and Chairman of the Board (On behalf of the Registrant and as Principal Executive Officer)

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Matthew Calkins, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended June 30, 2019 of Appian Corporation (the "registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 8, 2019

/s/ Matthew Calkins
Matthew Calkins
Chief Executive Officer
(principal executive officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Mark Lynch, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended June 30, 2019 of Appian Corporation (the “registrant”);

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: August 8, 2019

/s/ Mark Lynch
Mark Lynch
Chief Financial Officer
(principal financial officer)

Exhibit 32.1

**CERTIFICATIONS OF
PRINCIPAL EXECUTIVE OFFICER AND PRINCIPAL FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, (the "Exchange Act") and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. §1350), Matthew Calkins, Chief Executive Officer of Appian Corporation (the "Company"), and Mark Lynch, Chief Financial Officer of the Company, each hereby certifies that, to the best of his knowledge:

1. The Company's Quarterly Report on Form 10-Q for the period ended June 30, 2019, to which this Certification is attached as Exhibit 32.1 (the "Periodic Report"), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

2. The information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, the undersigned have set their hands hereto as of the 8th day of August, 2019.

/s/ Matthew Calkins	/s/ Mark Lynch
Matthew Calkins	Mark Lynch
Chief Executive Officer (principal executive officer)	Chief Financial Officer (principal financial officer)

- This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Exchange Act (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.