

What it's like to be a Klaviyo Intern

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Claps: 103

Date: Sep 10, 2019

This summer, Klaviyo welcomed its inaugural class of engineering interns to work directly alongside our engineering teams. Over the course of several months, our eight interns worked on a variety of projects across our Product Engineering and Site Reliability Engineering teams. We caught up with a few of them to see how their summer went.



[From left to right] Maya, Vittoria, Connor, Simon, Elliot, Reid, Hannah, and Rupayan posing with their end-of-summer gifts

Read on to learn what it's like to be an intern here:

Who are you?

Elliot:

Iâ€™m Elliot, a rising senior at RIT. For these past 3 months, Iâ€™ve been working as part of the Storage team. Iâ€™m an avid rock climber, amateur soccer goalie, and in my free time I chip away at my Bachelorâ€™s degree in Computer Science.

Vittoria:

Iâ€™m Vittoria, a rising senior studying Computer Science and Mechanical Engineering at the University of Massachusetts Lowell. I was an intern on the Mobile team, which owns the mobile apps, SDKs, and messaging channels at Klaviyo.

Rupayan:

My nameâ€™s Rupayan, and I was an intern on the Email team this past summer. I just finished my undergraduate degree in computer science from MIT, and Iâ€™ll be returning in the fall to complete my Masters degree. During my time at Klaviyo, I performed the tasks of a full-stack software engineer, from fixing bugs to implementing new features. This included designing new front-end views, creating API routes, making new services, and performing database migrations.

Simon:

Iâ€™m Simon, a rising sophomore studying computer science at the University of Massachusetts Amherst. I interned on the Site Reliability Engineering (SRE) team, which is responsible for ensuring the availability and security of Klaviyoâ€™s infrastructure and services.

Maya:

Iâ€™m Maya, a rising junior studying Computer Science and Mathematics at MIT. I was an intern on the Ingest team, which manages and maintains the code for Klaviyoâ€™s external integrations and manual data imports. When Iâ€™m not sitting in front of a computer monitor, you might find me singing with my acappella group, painting, or skydiving!

Reid:

Hey, Iâ€™m Reid. Iâ€™m a rising sophomore studying Software Engineering at Rochester Institute of Technology. This summer I worked as an intern with the Content team whoâ€™s responsible for various parts of the product like signup forms, tags, and the email template editor.

Why Klaviyo?

Reid:

Before joining Klaviyo, I had always been interested in working on my own projects for fun. At my collegeâ€™s career fair, when I first talked to Klaviyo, we got onto the topic of projects that we had built for fun, like an app to locate Chinese food on campus. This kind of conversation was what really made Klaviyo click for me. To me, being at Klaviyo meant being surrounded by people who enjoy learning and appreciate the value of a collaborative workspace. As I continued the interview process, I could tell how passionate everyone was. As a company, it seemed Klaviyoâ€™s goal was to have me learn valuable things during my time there and help me to solve real problems, which is ultimately why I joined.

Rupayan:

I arrived at Klaviyo through the long and painful process known as tech-industry recruitment! In other words, I met them, along with many other companies, at my university career fair. What stood out about Klaviyo throughout the process was their genuine care for the people they were interviewing. When meeting Greg, the Director of Engineering, I could tell that Klaviyo was

thinking about the people they would hire. Greg handed me a nice one-page document that clearly described the kind of work each engineering team does at the company, with a breakdown of front-end and back-end focus. The on-site interview itself was a refreshing surprise; rather than giving me an obscure brain teaser or algorithm that would not reflect what I would be doing at the company, I was asked to code-review a poorly written script. The process moved rather fast, and the care and respect from the team did not stop after I received my offer. From negotiating the offer deadline, to inviting me to phone calls and further on-sites to just meet the team and experience the culture, I always had the feeling of, *wow, these folks really care about the people they want to hire.*

Vittoria:

I asked everyone that interviewed me the same question: “Why Klaviyo?” While the responses ranged, all of them came down to one thing: growth. The interviewers told me how Klaviyo offers various types of classes to employees, and how every December engineers can pick up self-guided development-oriented projects specifically focused on how they can grow or learn. They also told me how fast the company was becoming, more than doubling each year. Seeing how employees at Klaviyo can experience personal and company-wide growth and development made the decision of whether or not to work at Klaviyo simple. I knew a company that nurtured growth and learning would be a perfect place to intern.

How has Klaviyo been different from your past employers?

Maya:

I think the biggest difference is the amount of responsibility and independence I was given. Unlike past internships, I didn’t have a direct supervisor, but was instead treated like just another member of the team. When my coworkers fixed bugs, I fixed bugs with them. When they were working on longer-term projects, so was I. The projects I was given to work on weren’t easy, but my coworkers trusted me to live up to the challenge, and I did my best to make them proud. Even when we weren’t working, I felt like part of the team; I loved the moments where we would joke around together and have fun with each other, even as we worked diligently to upkeep and improve Klaviyo’s product.

Elliot:

Klaviyo is small with quick growth and iteration. Since I interviewed last fall, Klaviyo has doubled in staff size. As far as iteration goes, we deploy code multiple times every day. Working here is exciting and everyone is quite engaged with the culture. There have been well-attended company-wide events every few weeks, including a night at the aquarium, a pasta-cooking class, and a game night. Once a month, small groups are randomly assigned to have lunch together. On Fridays, the entire company comes to one space to review the past week and Klaviyo will frequently stick around afterwards to chat or play games.

Rupayan:

When I arrived in early June, the environment felt better than any company I had worked for previously. In our small team of 4, I was continuously learning while having fun, joking around, and shipping code. Of course, I don’t mean to imply that Klaviyo’s code deployment process lacks seriousness – in fact, I’ve received detailed reviews on features I hoped to merge into the codebase, feedback that repeatedly guided me to grow as a developer and engineer. However, in the moments where something did fall through, and I mistakenly deployed a bug, my calm and friendly peers would support me through finding and solving the issue, teach me how to avoid similar things in the future, and reassure me that everyone makes mistakes. It was a judgement-free process.

What did you work on?

Elliot:

Rather than working on big projects, I spent 1-3 week periods on a number of smaller features, mostly contributing to the storage pipeline. The storage pipeline is our name for the process of storing incoming events such as purchases or email reads by a customer, as well as generating analytics from the incoming events, such as the number of opened emails. We use many industry standard tools including Kafka, Redis, Flink, Cassandra, and gRPC. The largest feature I developed added endpoints to our internal gRPC API. This endpoint reads data from Cassandra and makes it available to other teams within Klaviyo. Additionally, I worked on updated tooling for repairing our analytics to ensure accuracy. I created a new builder pattern that generates both a CLI and web view from a single declaration, allowing us to keep our tools at Klaviyo DRY.

Vittoria:

My first big project at Klaviyo was the Emoji Picker. As someone with little front-end experience, this project gave me the opportunity to learn more about React, Javascript, and CSS. After that feature was deployed, I worked on an upcoming major feature. This was also when I started working more in sync with my team, as every single member of the Mobile Team mainly worked on this full stack project. Since this was such a big project, most of the parts I worked on took up to about 1-2 weeks. This gave me a chance to work on different things and to see how a full stack project is implemented.

Rupayan:

During my time at Klaviyo, I had the opportunity to focus on designing and creating a new feature called the Activity Map, a real-time and historical visualization of the geospatial spread of event data for any given company. The Activity Map aims to provide an at-a-glance view into the scale and speed at which data enters the Klaviyo system. Users can select from any of their metrics and see events charted out on a map. Questions such as, “where did people buy my products the most in the last month?” and “where are people using my website right now?” are easily answered with this new tool.

Maya:

I spent my time at Klaviyo working on a variety of 1-3 week-long projects revolving around Klaviyo’s integrations and data importing. Most of the work I did was on the backend in Python, although I did use React, Javascript, HTML, and CSS for some small UX changes for some of my projects. Other tools I used throughout the summer were Django and RabbitMQ.

My favorite project involved restructuring the process used to import data from a CSV file into a Klaviyo account. The functionality had existed before, but it wasn’t frequently used because it was slow and broke often. If a customer wanted to upload 500,000 events, it would take around 12 hours, if it worked at all. The upload process was also vulnerable to cross-site scripting, and if a customer entered a CSV with invalid formatting, the process would stall. Using worker tasks, queues, Django, and a lot of Python code, I was able to switch over the process from synchronous to asynchronous, guard against cross-site scripting, and change the structure so that one or two invalid lines wouldn’t invalidate a whole file. Thanks to those changes, 500,000 events can now be uploaded in less than 15 minutes.

Simon:

My main project this summer was revamping Klaviyo’s user management for its servers. At any given moment, Klaviyo has thousands of EC2 instances running every part of our service.

It's important to give developers access to these servers with SSH so that they can deploy their code to them and inspect them when things go wrong.

Klaviyo currently stores its user information using Apache ZooKeeper. In Zookeeper, every engineer with access to our production servers has a username associated with a public key for SSH. At launch, each server figures out which users ought to have access to it and pulls their information from ZooKeeper, creates users, and adds their keys to the list of authorized keys for the accounts they need access to.

One of the biggest changes I made this summer was introducing team-based user management. Before, every user had to manually add themselves to every cluster they wished to have access to. I introduced team objects into our ZooKeeper configuration and launch scripts, so that you could add a team to a cluster, and on launch the server would add all users associated with that team as well.

Another project I worked on was a tool for revoking access to our servers for some blacklisted users automatically. Fortunately, our "blacklist" is only former Klaviyo employees for now, but it could also someday include users whose private keys have been compromised.

Reid:

Coming from a background involving mainly backend experience, Klaviyo and my team presented me with the opportunity to learn more about front-end frameworks like React which is largely used in our web application.

Within three days of joining the team I had shipped my first small feature of adding styling options to signup forms. It was really cool to be able to ship something to customers within my first week at Klaviyo to help me learn the tech stack as well as get experience with deploying.

My main two projects this summer were building the Form Template Library and re-building the Image Library with React. The Image Library is what I considered my first medium sized project. I had been working for two or three weeks at this point, getting comfortable with React by shipping smaller things like new styling features, ARIA compliance, and small bug fixes to our product to get me comfortable with our tech. The Image Library was the first project I worked on with more of a lean towards the backend and full stack experience. I got to work a lot with our backend and APIs built in Python/Django while building the front end Image Library in React. I learned a ton on this project involving React and Django Rest Framework and got a good foundation with topics like context, server-side pagination, debouncing, and Django serializing to name a few.

My largest project this summer was building the Form Template Library. This project was by far my favorite as it involved a total full stack experience. There was a large focus on backend work largely involving Django Rest Framework in addition to our React automation library. It was a great experience to work closely with our product manager and designers to ship a product that we were all proud of. This project took a few weeks to complete but at the end I had gained a lot of experience going through code reviews, talking to stakeholders, and engaging with the product team to get the best fit for our users. Overall, I think while building these projects that by asking my team members and through code review I learned a lot more than one might expect during their first internship.

What was your favorite part or most memorable moment from your summer at Klaviyo?

Vittoria:

My summer at Klaviyo was amazing, to the point where picking the most memorable moment is a bit difficult. My first week was a lot of fun. I got to meet my team, learned more about Klaviyo through the on boarding process, and went to a Klaviyo-hosted event where they rented out the entire Boston Aquarium. I also enjoyed the team-building internship activities planned for us by Klaviyo, such as the escape room outing we were all invited to. However, the moment that takes the cake for being the most memorable would have to be when the Mobile team tested out our new feature end-to-end. That moment definitely made the hard work we put in to this large-scale project worth it.

Simon:

The best part about interning at Klaviyo was how much freedom I was given to explore and learn. Most of my previous software development experience was in robotics and embedded systems, so working on a website was an entirely new type of work for me. At my first one-on-one with my boss, she asked me what I wanted to do that summer and what I wanted to learn. I picked an easy starter project to get my feet wet (adding a form to a dashboard) with a larger project once I finished that (SSH management) and said I was most interested in learning about networking. SRE and the entire Klaviyo team were super helpful with all the new stuff I had to learn and have made it a point to find me cool networking-related work to do.

Reid:

My favorite part about Klaviyo is the people there. My team was filled with great people who made it their goal for me to have a valuable experience this summer. It was really neat to be working on things that would be used by our customers and have the support of my team to encourage different learning opportunities and growth throughout the summer. Klaviyo places its emphasis on learning and I can definitely say that the engineering-wide mission is for everyone to learn and come out as a better engineer.

How was your first week?

Simon:

My first day at Klaviyo started with a company-hosted bagel breakfast, where all the new hires that day got to meet each other. (There were 17 of us that day, the largest in Klaviyo's history!) The rest of the morning was spent on the sorts of events you would expect for new hires: an office tour, payroll information, and the like. After lunch, we were released to meet with our teams and get our work environments set up. Fortunately, getting up and running was easy since the SRE team had done a great job documenting all the things I needed to register and repositories I needed to run.

The rest of the week was spent on getting acquainted with Klaviyo's code and infrastructure, and writing code for my first project. This work was interspersed with random fun, like Wednesday's Leveling Up talk (catered by Fuddruckers), a pep rally for Klaviyo:BOS with a surprise visit from Pat Patriot, and an end-of-the-week intern pizza party!

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Interested in joining us next summer? Visit [our careers page](#) to learn more about our open internships and co-ops.