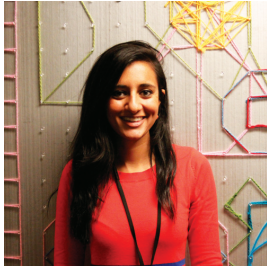# FEATURED INTERN PROFILES

ELLORA ISRANI

Junior, CS, Stanford,
Product Quality Engineer

Ellora is a self-described talker: she loves talking to people, learning from people, and working with people. Her summer spent as a Product Quality Engineer proved to be as engaging as she had hoped. Combining her computer science background and her collaborative communication style, Ellora wrote new automated tests for the Palantir Metropolis platform, built a demo analyzing teams and performance in the 2012 UEFA Football Championship, and helped the business development and product teams develop new features for customers.

LESSON LEARNED: "The code I write in school is very pointed towards the end result. This summer, it was about what I could write so that other people in the future could understand it. What you're actually doing is going to be used when you're gone."

JAY BAXTER
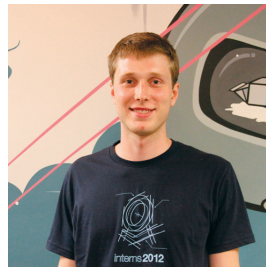
Senior, CS, MIT
Software Engineer

An SF Bay Area local, Jay spent his summer on a feature with impact far beyond Palo Alto. Jay incorporated viewshed analysis—determining what land is visible from a vantage point by using elevation data—into Palantir Gotham's map application. He was attracted to both the challenge of processing the amount of data necessary to compute and render viewsheds quickly, and the impact his contribution could have for users in the field. Jayt focused on performance engineering. He profiled his code to build a highly parallel algorithm that could run within tight memory constraints without sacrificing performance.

LESSON LEARNED: "Once you get to understand what Palantir is, then you realize how powerful it is. It's not consumer software. Palantir is solving problems that could change the world."

ZACH STEWARD

Senior, ME and CS, MIT
Product Quality Engineer

Zach purposely injected bad code into Palantir Gotham to build a "game" where people would find bugs in the software. After the game was completed, Zach organized a test run with our full-time Quality Engineers to see how well they did at finding bugs. Additionally, with an interest in finance and economics, Zach rotated to Palantir Metropolis for a few weeks and built a custom metric for predictive stock analysis. He presented his findings to the team and back-tested the metric against prior data.

LESSON LEARNED: "Over the summer, I learned how much applications of Palantir could benefit society—and it was good to learn that there are really smart people making this happen."

GAUTAM KAMATH

CS & ECE BS, Cornell, 1st Year, CS PhD, MIT
Software Engineer

Gautam interned at Palantir after several summers spent doing research for the chance to experience an interesting set of engineering challenges. As a back-end dev, Gautam worked on auto-updating data ingest in Palantir Gotham and wrote code to improve parallelism by reducing lock contention while processing graph links. Gautam's work had big results: data is now processed up to twice as fast at this stage.

LESSON LEARNED: "The most interesting thing for me is an open problem—when you know there is a problem and there are suggestions on what to do and how to approach it, but there's no clear solution. Creative design and experimentation need to be involved until you can get it right."

WILL MACRAE

Senior, CS and Mathematics, CMU
Software Engineer

Will spent his summer improving Palantir Video's ability to detect and provide alerts for activity in video footage. Will's graduate-level algorithms skills didn't hurt, but he credits a trip to the police department as an essential piece of figuring out the puzzle. During his internship, his team had the opportunity to sit down with real users and witness Palantir Law Enforcement in action.

LESSON LEARNED: "You can throw as much math as you want against a problem, but what you're doing is for naught unless you know how it's going to be used and how it's going to make things better."

"Once you get to understand what Palantir is, then you realize how powerful it is. It's not consumer software. Palantir is solving problems that could change the world."

— Jay Baxter

Palantir
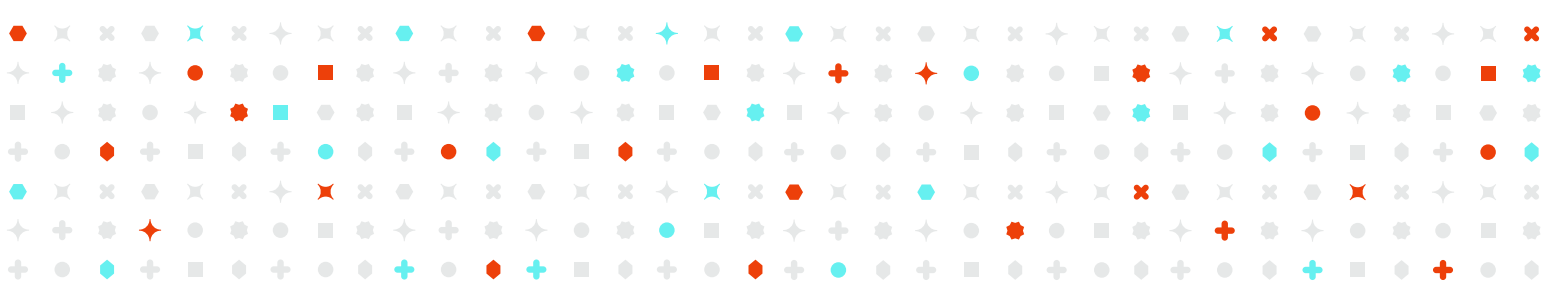
SAMPLE PROJECTS

SOFTWARE ENGINEERING INTERNS

- Created the Code 33 Map application, an HTML5 map application integrating parallel visualizations of aggregated data and support for geospatial layers.

- Built Timechart, an advanced time-based visualization for the Palantir Gotham platform, incorporating new types of charts, property-based analyses, and playback capabilities.

- Developed Interstate, a build-out of distributed key/value storage and processing infrastructure for large-scale data integration.

- Added mirroring to a distributed in-memory object database to enable redundant failover

- Developed a way to extract structure from semi-structured or unstructured text. Given a set of semi-structured documents (e.g., phone records, expense reports, forms), Palantir Gotham can now automatically extract structure about events and entities. Given a set of unstructured text documents, the platform can suggest tags, tag types, or mappings from tags to objects.

- Built Echidna, a distributed computation back-end for interactive quantitative analysis to identify patterns of fraud and other activities in massive healthcare datasets.

QUALITY ENGINEERING INTERNS

- Imported and analyzed information about the 2012 Election in Palantir Gotham

- Developed an easy tool for random data-generation

- Createdd PT Cloud, the company's next generation VM solution

- Developed domain-specific language (DSL) inside Palantir Gotham, which allows users to easily script interactions that they otherwise wouldn't be capable of doing with single/many Palantir Gotham clients

- Built a load simulator that can be used to do performance and stress testing of the Palantir Metropolis server

- Implemented static code analysis to detect problems in Palantir Metropolis using a findbugs plugin

TECHNICAL WRITING INTERNS

- Developed designs and working web prototypes for redesign of documentation landing and topic pages

- Rewrote the Palantir Gotham Quick Start Demo documentation as a comic book and worked with the in-house design team to create illustrations and graphics

SUPPORT ENGINEERING INTERNS

- Built a tool to quickly parse log files for the Support Team

- Improved the build system for our externally-facing sample code

- Created external developer documents and examples to explain how to use Access Control Lists through our API

- Created a JIRA data provider to enable deep bug and customer analytics in Palantir Metropolis

- Created a Java program now shipped with platform to provide remote mbean calls to running Metropolis servers

SIMULATION ENGINEERING INTERNS

- Created a tool to simultaneously view, monitor, and interact with all VMs running automated tests. This included features to handle and display multiple VNC connections, manage mouse and keyboard inputs, and view status for individual VMs or for the system as a whole

- Implemented web-based automation tests for the PEM (Palantir Enterprise Manager) Investigations Manager feature as well as various features within PG Web

- Added functionality to automatically save and archive screenshots of different versions of major features within Palantir Gotham

BUSINESS DEVELOPMENT INTERNS

- Used PIG to analyze Hadoop job results and import them into Palantir Gotham for analysis

- Added the ability to export maps from Palantir Gotham to an HTML file that can be shared over email with users who are not on the system

- Redesigned the Palantir Dynamic Ontology Manager to be web-based, have much smarter user interaction characteristics, and support working with multiple ontologies

- Created a demo of our work in home lending, which is helping hundreds of thousands of homeowners find alternatives to foreclosure

- Wrote extensions for the Russel data provider that have been already been deployed into a live customer production environment

DESIGN INTERNS

- Developed custom branding, illustration, packaging, and print design for Palantir's annual "Puzzle Hunt"

- Designed an interface for a major police department's command center to visualize calls for service in real-time