Mark Fickett

Full-stack web Software Engineer with 14 years experience. Seeking design- and implementation-heavy role at a Boston, MA (or remote) company with positive social impact and strong, diverse employee representation.

Contact

[LinkedIn](#)

Skills

- Primary languages: Python, SQL, Java or Kotlin, TypeScript, HTML/CSS, SQL
- I can work with: Go, C, Ruby, javascript, Django, jinja, Markdown, Makefiles, bash, C++
- Tools/tech: git, AWS, Kubernetes/EKS, vim, gRPC/protobuf, Pulumi, REST, Vue.js, Linux, Google Cloud, CircleCI, JIRA, flask, JDBC/JPA, MQTT
- Practices: I draw readily from AGILE/scrum, continuous integration / TDD.

Form Energy (2021 Sep - Present, Staff Data Engineer, Somerville, MA)

Battery research data pipeline for grid storage.

- Migrated on-prem python multithreading data pipeline to Dagster orchestration executing in AWS EKS (Kubernetes) managed with Pulumi. Implemented patterns later adopted by platform and battery-control teams for EKS, Pulumi, and AWS Parameter Store usage.
- Led selection and implementation of OpenTelemetry and Honeycomb observability using structured traces/events, replacing previous text based logging approach. First usage of structured tracing at the company, now adopted by two other teams. Replaced daily manual oncall review process with automated alerts and started first formal oncall rotation, a practice replicated by teams both in and outside of software.
- Designed and implemented parsing and simulation library for undocumented battery cycling domain-specific language. Collaborated across other software and lab teams for design, hosting, and usage. Replaced JSON based parsing, and automated hours/week manual documentation process.

Valo Health, previously Integral Health (2020 Jan - 2021 Sep, Senior Staff Software Engineer, Boston, MA)

Applying machine learning to drug discovery and development.

- Led technology selection for modern webapp stack across server framework, DAO (database access), IDL (interface definition language), frontend; production concerns from testing to auth. The stack was implemented in two major projects immediately. I designed the stack, prototyped alternatives, built team concensus and approval.
- Tech lead for internal drug discovery webapp rewrite. Designed, led implementation, cross-functional collaboration with chemists for product/UX definition. From starting tech selection to MVP (min viable product) with two engineers in two quarters. Kotlin, MySQL/JDBC, gRPC, Vue.js/TypeScript, Okta.
- Implemented our first automated ML data ingest pipeline. Cross-functional collaboration with data science from gathering requirements through handoff. Integrated with external APIs and internal job scheduling. Python, AWS (S3, Athena), bash, Jenkins.
- Worked with recruiter and senior eng to grow the software infrastructure team from 3 to 8, including outreach, interviewing, defining roles and rubrics.

Verily (2016 - 2020, Cambridge, MA)

Onduo (Tech Lead of Integrations, 2017 - 2020)

Virtual type 2 diabetes clinic.

- Design, implement, and launch multiple Java REST client and SFTP integrations which handle thousands of users' traffic reliably.
- Plan and perform maintainenance, updates, monthly milestone releases coordinated with internal servers/apps and external partners.
- Own new cross-stack features through entire lifecycle (research, design, implement, integration test, analyse, document) based on provided PRDs.
- Example feature: Athena EHR integration for appointment scheduling, allowing patients to directly view and schedule appointments. Coordinated mobile implementation while completing the majority of the integration, backend, and frontend implementation.
- Coordinate work of 1-3 other junior and senior engineers. Collaborate with PMs and UX. Mentor new team members. Regular code reviews and design collaboration.
- Set up monitoring/alerting for production, maintain dev and test environments, set up an oncall rotation and train colleagues to participate in it.
- Part of a larger team of a few dozen engineers on Onduo.

All of Us (2016 - 2017)

[NIH-funded project](#) to collect health data from a million people for 10 years.

- Implement internal-facing REST API for the [Raw Data Repository](#), a CloudSQL medical research database. ([Example commits](#).)
- Design, prototype, and collaborate to implement Angular/TypeScript web FE researcher-facing [Workbench](#) UI for cloud hosted notebook data analysis. ([Some example commits](#).)
- Set up project infrastructure (linting, unit test presubmits, PIP module packaging), load test, document, plan development milestones.
- 1 of 2 primary engineers at Verily, collaborating closely with eng, PM, and UX [at The Broad Institute](#).

Google (2011 - 2016, Cambridge, MA)

Project Sunroof (2015 - 2016)

- Data pipelines for [regional solar potential summaries](#), also [surfaced in Google Search](#).
- Sole query/pipeline implementation, data definition, QA, and data publication.

- Proceessed solar data for 10s of millions of houses across the United States.
- Integration with Google Maps data, including working with Maps to fix quality issues in the data.
- Team of 6 engineers plus UX, PM, biz dev.

Google Play for Education (2012 - 2015)

- Founding member of a team of 6.
- Rapid prototyping of Android and web FE demos used to sell the product vision to management.
- Design and implement new bulk licensing database, UI, and business logic.
- Reimplement purchase order processing system. Design and implementation lead with 2 junior engineers. Cross-team/-site collaboration with 2 other payments organizations/systems within Google. Handled $10s of thousands revenue, and resolved the previous system's weekly customer-facing financial errors.

Google+ Publisher Widgets (2011 - 2012)

Designed, implemented, and launched widget configurator tool for web developers to get +1, Share, Snippet, and Brand Badge widgets for Google+. Served thousands of queries per day.

Simplified Google+ login flow by reducing number of different screens; UX and technical design and implementation. Added Thanksgiving Google Doodle integration (for 2011, covered by Mashable). Cross-team and cross-site collaboration. Drove tens of thousands of signups.

Sony Pictures, Imageworks (2008 - 2010, Los Angeles, CA)

Junior engineer on a team of 6 developing a desktop graphics application, Katana. Image processing and UI work. The application was sold to The Foundry and licensed to ILM as a commercial product.

University of Pennsylvania (class of 2008, Philadelphia, PA)

Digital Media Design, combining computer graphics, fine arts, and CS.

Outside of work

I spend my time with my wife in Union Square caring for our 1st child, making a Pi-powered dice analysis machine featured on Ars, hiking, self-hosting HomeAssistant and Tasmota devices, and making art.