

Michael Cousins

Brooklyn, NY | michael@cousins.io | michael.cousins.io | github.com/mcous

Full-stack staff software engineer and technical leader.

Solving users' problems thoughtfully (with tests) for 10+ years.

Empowers teams to ship high-quality products and experiences.

Work Experience

Viam 1¼ years | Platform for building and managing smart machines

Software Engineer 5 (Senior) — Feb 2024 to present

Software Engineer 4 (Senior) — Mar 2023 to Feb 2024

- Planned and shipped a rebuild of Viam's machine configuration UI, leading a team of nine engineers to drastically improve the app's ease-of-use and reliability
- Led a multi-team, multi-project effort to move Viam's web app from a brittle, untested proof-of-concept to a resilient, growth-ready SvelteKit app, digging the app out of tech-debt bankruptcy and unblocking parallel feature development
- Switched to Playwright for E2E tests by overhauling CI workflows, reducing spurious flakiness and keeping CI fast while contributions increased
- Skilled-up software engineers of varying levels of experience on unit testing, end-to-end testing, continuous integration, and architectural best-practices

Opentrons 5½ years | Open-source liquid handling robots for biologists

Software Engineer 4 (Senior) — Mar 2019 to Mar 2023

Software Engineer 3 (Mid-level) — Mar 2018 to Mar 2019

Frontend Software Engineer — Aug 2017 to Mar 2018

- Designed, built, and shipped a reliability-focused rewrite of the OT-2 and Flex robots' control and workflow execution software, unblocking complex multi-system integrations while keeping users' already functioning workflows intact
- Architected, developed, and maintained the Opentrons App, the Electron and React desktop app that controls the OT-2 and Flex robots
- Prioritized work with my teams' embedded designers and product managers, shipping fixes and features to reduce customer support requests by 30%
- Configured and maintained CI and deployment systems for multiple products across multiple languages, operating systems, and CI providers

Keen Home 2¾ years | Smart, connected HVAC products

Product Engineer — Jul 2015 to Jul 2017

Mechatronics Engineer — Nov 2014 to Jul 2015

- Rebuilt the Keen Home API's auth systems - written in Scala - allowing users to integrate their Smart Vents with Ecobee thermostats and Amazon Alexa
- Designed and implemented hardware and software for assembly-line QC fixtures
- Created and managed Node.js-based production systems, tools, and tests

Wiley Cousins 1¾ years | Contract software & hardware engineering

The "Cousins" half — Feb 2013 to Oct 2014

- Designed electronics and firmware for wearables and other connected products
- Created and taught a 12-week "Introduction to Circuits" class

Open-Source Projects

[testing-library/svelte-testing-library](#)

Sole maintainer

Renders and tests Svelte components for Viam and thousands of other users.

[JS-DevTools/npm-publish](#)

Sole maintainer

Automatically publishes libraries to npm for Viam and thousands of other users.

[mcous/vitest-when](#)

Creator

Isolates Viam's & Opentrons' UI logic in tests with easy conditional stubbing for Vitest.

[mcous/decoy](#)

Creator

Isolates Opentrons' core logic in tests with easy conditional stubbing for Pytest.

[tracespace/tracespace](#)

Creator

Renders fabrication (Gerber) files as SVG on various PCB manufacturers' websites.

Skills

Languages

- TypeScript & JavaScript (Expert)
- Python (Intermediate)
- Go (Familiar)

Testing

- Test-driven development
- UI component testing (Testing Library)
- Automated end-to-end testing (Playwright)

Front-end

- Testable, scalable application architecture
- API data management
- Component-based UI (React, Svelte)

Back-end

- HTTP API design
- Event-driven architecture

Leadership

- Technical skills development
 - Project management
-

Education

B.Sc. Mechanical Engineering

- Northwestern University, class of 2012
- Concentration in mechatronics