

PATRICK CASON

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Senior Full Stack Engineer, Engineering Manager

Experienced hands-on engineering manager with **12+ years** of experience building web and mobile applications and **5+ years** leading large-scale teams with upwards of 80 members. Currently seeking an opportunity as an engineering manager or senior full-stack engineer.

TECHNICAL SKILLS

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|--------------------------|--------------------------|-----------------------|
| • Javascript – 12 years | • React.js – 8 years | • Webpack – 6 years |
| • PHP – 12 years | • D3.js – 8 years | • Redis - 6 years |
| • SQL – 12 years | • Stripe – 7 years | • Docker – 5 years |
| • Adobe Suite – 12 years | • WebRTC – 7 years | • Jest – 5 years |
| • Wordpress – 12 years | • Typescript – 6 years | • Storybook – 5 years |
| • Node.js – 11 years | • Next.js – 6 years | • Figma – 5 years |
| • Java – 9 years | • Python – 6 years | • Cypress – 4 years |
| • AWS – 9 years | • Google Cloud – 6 years | • Plaid – 4 years |
| • Firebase – 8 years | • Sketch – 6 years | • Twilio – 4 years |

PROFESSIONAL EXPERIENCE

Raise Financial (Part-Time), Nashville, TN

Sep 2017 – Present

CTO/Engineering Team Lead (Sep 2017 – Present)

- Managed a 5 person engineering team to implement iterations of web application and API development written in **Next.js** and **Typescript**, using the Stripe, Plaid, Mailchimp, Alpaca, and Twilio APIs.
- Advised the CEO and Board of Directors with key financial figures and projections related to building out and scaling the engineering team.
- Built, launched, and scaled a web application helping hundreds of families save over \$3 million towards future education expenses.

Self-employed (Patrick Cason LLC), Nashville, TN

Senior Software Engineer (Oct 2022 – Present)

Meta/Kustomer

- Co-authored an **SDK** in **Typescript** for building third-party applications with Kustomer, allowing for securely embedding externally-authored code. Contributed well over 100k lines of code on this project alone.
- Developed and released 3 production-scale applications for Magento, Klaviyo, and Slack using the applications SDK, one of which closed a backlog of over 30 tickets related to bugs in the previous release.
- Wrote all technical documentation for the applications SDK, created 8 sample apps, and brought test coverage from **54% to over 95%**.

Senior Software Engineer (Sep 2021 – Oct 2022)

Vianai

- Designed a UI component library using **Typescript** and **Storybook** from scratch, comprising over 30 smart components for server-side pagination, tables, filtering and sorting, and data visualization.
- Re-engineered over 60% the front-end application in **React.js** as part of an org-wide refactor.
- Improved application load time by **120%**, decreased memory usage by **300%**, all while decreasing codebase footprint by roughly 30k lines of code.

OpenMined, Lisbon, Portugal / Rio de Janeiro, Brazil

Jul 2017 – Jul 2021

Engineering Team Lead (Oct 2020 – Jul 2021)

- Managed 80+ fully-remote software engineers, cryptographers, and data scientists divided across 15 teams to build open-source privacy-preserving libraries in **Python, C/C++, Go, Rust, and Typescript**.
- Liaised with external partners (Google, Meta, Microsoft, Twitter, and the University of California) to write grants totaling over \$2 million for the purposes of funding engineering efforts across the organization.
- Architected over 15 libraries for privacy-enhancing technologies such as: Secure Multi-Party Computation, Homomorphic Encryption, Differential Privacy, Federated Learning, Self-Sovereign Identity, Distributed Computing, and Remote Computation.

Federated Learning Team Lead (Aug 2019 – Oct 2020)

- Architected the world's first open-source libraries for distributed Federated Learning on web (**Javascript**), Android (**Kotlin**), iOS (**Swift**), and server/internet of things (**Python**).
- Coded a bridge library to convert **PyTorch** and **TensorFlow** plans into **TensorFlow.js** operations for trusted execution in remote environments, such as a web browser.
- Authored the entire technical architecture, system design, project roadmap, and a grant proposal totaling \$500,000, while managing a team of over 20 data scientists and software engineers.

Co-founder/Senior Privacy Engineer (Jul 2017 – Aug 2019)

- Awarded a paid 3-month research grant by the RAAIS Foundation out of a pool of over 6,000 candidates to develop a library for Federated Learning and Remote Execution in the browser using **TensorFlow.js**.
- Maintained the main website, blog, and e-learning platform handling over 10,000 monthly visitors; managed all **AWS** infrastructure.
- Served in roles primarily related to system development, software design, and community management - ultimately helping to grow the organization to over 14,000 members from over 80 countries worldwide.

Satchel Health, Nashville, TN

May 2014 – Jan 2017

Senior Solutions Engineer (Apr 2016 – Jan 2017)

- Deployed 40 implementations of proprietary hardware and software solutions to healthcare facilities on-site.
- Pipelined UX feedback from the field back to product teams at HQ, resulting in a 30% increase in usage.
- Trained over 200 doctors and nursing staff members at 20+ long-term health facilities across the US.

Senior Front End Engineer and Designer (May 2014 – Apr 2016)

- Designed and developed the organization's telehealth software for web (**Javascript**) and Android (**Java**).
- Integrated third-party hardware devices like Google Glass and Bluetooth-enabled medical devices to stream data to a remote clinician in a secure HIPAA-compliant environment.
- Delivered live patient vital signs and multi-source audio/video feeds via **WebRTC** in a purpose-built **React.js** application, coordinating with a horizontally-scaled **Redis** pub/sub socket server.

Golden Spiral Marketing, Nashville, TN

Jul 2011 – Aug 2012

Web Developer (Jul 2011 – Aug 2012)

- Created 40+ **WordPress** websites for clients while also enrolled as a full-time student.
- Collaborated with a design team using the **Adobe Creative Suite** to code pixel-perfect, mobile-first websites.
- Coded 10+ custom **PHP** plugins to augment functionality on client websites and integrate with CMS's.

EDUCATION

Belmont University, Nashville, TN

BS - Web Programming and Design (Minor in Entrepreneurship)