

PATRICK CASON

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Technical Consultant, Advisor, Fractional CTO

Hands-on engineering manager with **15+ years** of experience building and scaling full-stack applications and **5+ years** leading 80+ member teams. Seeking technical consulting relationships with early-stage ventures.

TECHNICAL SKILLS

- Javascript – 15 years
- PHP – 12 years
- SQL – 12 years
- Adobe Suite – 12 years
- Wordpress – 12 years
- Node.js – 11 years
- Java – 9 years
- AWS – 9 years
- Firebase – 8 years
- React.js – 8 years
- D3.js – 8 years
- Stripe – 7 years
- WebRTC – 7 years
- Typescript – 6 years
- Next.js – 6 years
- Python – 6 years
- Google Cloud – 6 years
- Sketch – 6 years
- Webpack – 6 years
- Redis - 6 years
- Docker – 5 years
- Jest – 5 years
- Storybook – 5 years
- Figma – 5 years
- Cypress – 4 years
- Plaid – 4 years
- Twilio – 4 years

PROFESSIONAL EXPERIENCE

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

Technical Consultant (Oct 2022 – June 2024)

Meta/Kustomer

- Co-authored an **Apps SDK** for building third-party applications with Kustomer that securely embeds externally-authored code. Contributed over 100k lines of code on this project alone.
- Released 4 production-scale applications for Magento, Klaviyo, Zoom, and Slack using the Apps SDK, one of which closed a backlog of over 30 tickets related to bugs in previous iterations.
- Wrote all public technical documentation for the Apps SDK, created 8 sample apps, and brought test coverage from **54% to over 95%**.

Technical Consultant (Aug 2021 – Oct 2022)

Vianai

- Led engineering effort to **rebuild 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 **over 30k lines of code**.
- Designed a UI component library using **Typescript** and **Storybook**, comprising over 30 smart components for server-side pagination, tables, filtering and sorting, and data visualization.

Raise Financial (Part-Time), Nashville, TN

Sep 2017 – Present

CTO/Engineering Team Lead (Sep 2017 – Present)

- Managed a 5-person engineering team to develop a **Next.js** and **Typescript** web application and API using the Stripe, Plaid, Mailchimp, Alpaca, and Twilio APIs.
- Selected from hundreds of applications to participate in the Rise startup accelerator, created by Barclays, in New York City.
- Deployed a web application helping hundreds of families **save over \$3 million** towards future education expenses.
- Scaled the API to process **over \$50k per month** in financial transactions.

OpenMined, Lisbon, Portugal

Jun 2017 – Jul 2021

Engineering Team Lead (Oct 2019 – Jul 2021)

- **Managed 80+** remote software engineers, cryptographers, and data scientists 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 internal engineering efforts.
- Architected **over 15 libraries** for privacy-enhancing technologies such as: Multi-Party Computation, Homomorphic Encryption, Differential Privacy, Federated Learning, Self-Sovereign Identity, Distributed Computing, and Remote Computation.

Federated Learning Team Lead (Jun 2017 – Oct 2019)

- Architected the world's first open-source libraries for distributed Federated Learning on web (**Javascript**), Android (**Kotlin**), iOS (**Swift**), and server and IoT (**Python**).
- Coded a bridge library to convert **PyTorch** and **TensorFlow** commands into **TensorFlow.js** operations for secure execution in remote web browsers.
- Authored the entire technical architecture, project roadmap, and a grant proposal totaling **\$500,000**, while managing a **20+ person team** of data scientists and software engineers.
- Founding member of OpenMined - 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.

Satchel Health, Nashville, TN

May 2014 – Jan 2017

Senior Front End Engineer and Designer (May 2014 – Jan 2017)

- 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 health 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 **React.js** application, coordinating with a horizontally-scaled **Redis** pub/sub socket server.

Ratio, 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)