

# Patrick Cason

Senior web software engineer

[LinkedIn](#) | [Github](#) | [Website](#)

Nashville, TN (remote-only)

me@patrickcason.com

(615) 339-4300

## Summary

Freelance senior software developer with 12 years of professional experience specializing in building scalable web applications and open-source libraries; also a highly capable UI designer and software team manager.

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## Experience

### OpenMined

Web and Mobile Privacy Researcher

July 2021 - Present

- Leading “skunkworks” team within OpenMined community to bring privacy-enhancing technologies to web and mobile devices via an intuitive developer experience
- Creating a series of libraries for software developers incorporating various bleeding-edge technologies such as WebRTC, Websockets, secure multi-party computation, peer-to-peer offline databases, and distributed computation for Node.js and the browser

Engineering Team Lead

October 2020 - July 2021

- Led over 100 remote software engineers, mathematicians, and cryptographers subdivided amongst over 30 individual teams
- Created technical briefs and documentation on various privacy-enhancing technologies such as secure multi-party computation, homomorphic encryption, differential privacy, federated learning, self-sovereign identity, and remote computation to name a few
- Detailed financial figures and projections at the request of management for the purposes of funding and staffing the Engineering team
- Collaborated with internal and external partners for the purposes of securing funding and other non-financial support resources

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## OpenMined (continued)

Federated Learning Team Lead

August 2019 - October 2020

- Created the world's first open-source libraries for federated learning on web (browser and server), mobile (native Android and iOS), and server/IoT (Python)
- Developed a bridge library to convert PyTorch operations into TensorFlow and TensorFlow.js operations for trusted execution on remote environments
- Authored the entire technical architecture and project roadmap
- Led a team of over 20 software engineers and researchers
- Worked with multiple external partners to secure over \$500k in funding for the project

Open-source Software Contributor

July 2017 - Present

- Served in a variety of roles related to software development and community management - ultimately helping to grow the community to over 12,000 members from over 60 countries
- Awarded a 3-month research grant out of a community of (at the time) over 6,000 people to develop a library for federated learning in the browser: syft.js

## Scholar Raise

Chief Product Officer

September 2017 - Present

- Designed the user interface of the web application, including numerous redesigns and user experience sprints
- Designed the corporate brand and identity, as well as other various presentation materials
- Created the initial front-end application that pairs with a Ruby on Rails back-end, deeply integrated with the Stripe, Plaid, and Twilio API's
- Grew and now manage a team of software development contractors for the last 3 years that regularly reports progress to management

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## Satchel Health

Director of Engagement

April 2016 - January 2017

- Worked on-site with clinicians, nurses, administrators, and patients to troubleshoot deployment issues of our proprietary telemedicine system
- Created a user experience workflow to pipeline data back to sales, marketing, management, design, and development teams
- Responsible for the on-site deployment and education of hundreds of nursing staff members in over 20 long-term health facilities across the United States

Lead Front-end Engineer and Designer

May 2014 - April 2016

- Designed and developed the front-end software for the first telemedicine offering with integrated hardware peripherals in the long-term health industry
- Integrated a variety of third-party hardware devices such as Google Glass, bluetooth stethoscopes, and pulse oximeters to stream live patient vital signs to a remote clinician in a secure environment

## Poliana

Co-founder, Front-end Developer, UI Designer

June 2013 - December 2014

- Aggregated multiple public datasets on the American political system amassing over 110 million rows of unstructured data on lobbying and campaign finance
- Designed and developed the entire front-end application, utilizing D3.js and other advanced data visualization techniques and libraries

## Golden Spiral

Lead Developer

July 2011 - August 2012

- Developed over 40 Wordpress websites and various custom utility libraries from scratch for various clients in the Nashville area
- Worked with a designer using the Adobe software suite to translate design mockups into fully-functional websites

## Self-employed

Freelance Developer and Designer

May 2009 - Present

- Working as a regularly employed web software developer and user interface designer for various clients across the world since high-school

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## Skills

HTML/CSS - 17 years

Javascript - 15 years

Node.js - 9 years

React.js - 6 years

D3.js - 5 years

AWS - 7 years

Firebase - 6 years

Google Cloud - 4 years

Serverless - 4 years

Management - 7 years

Competent in Python,  
Java, and Ruby

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Familiar with most  
modern SQL and NoSQL  
databases

## Education

2010 - 2014

*Belmont University*

B.S. Web Programming & Design | Minor in Entrepreneurship

## About Me

- Lived and worked remotely in over 25 countries
- Top 8% on Stack Overflow
- Technical editor on “D3.js By Example” by Michael Heydt
- Startup Bus top-6 finalist and alumni
- Started and grew an Airbnb business to over \$800k in yearly revenue
- Spent teenage years as a 3D animator and hobbyist video game designer
- Passionate about sustainable living and restoring vintage keyboards

I don't use social media of any kind. I am happy to supply references upon request.