Patrick Hulce

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Seeking a role with industry-level impact potential and a focus on AI for visual media.

Education

University of Pennsylvania   *summa cum laude*

Bachelor of Applied Science in **Computer Science**   GPA 3.89 / 4.0

Software Engineering Experience

Compass *JavaScript, Go, Python*   November 2021 - Present

Principal Software Engineer   August 2023

- ○ Über Tech Lead of Compass Platform Experience, responsible for frontend architecture across the entire company (200+ apps driving $6B in annual revenue, direct working relationship with C-suite).
- ○ Über Tech Lead of Compass Innovation Lab, an incubation organization responsible for Compass's continued adoption of artificial intelligence, large language models, and other emerging technologies.
- ○ Drove LLM and AI adoption throughout the platform, POC→MVP→GA, liaison for CISO, COO, legal.
- ○ Authored and taught a company-wide series of technical writing workshops (9.4 NPS).

Senior Staff Software Engineer   November 2021

- ○ Über Tech Lead of Sell Side (~120 ICs), responsible for frontend and backend of 8 major products.
- ○ Created and chaired an org-wide architecture design review process (20+ projects reviewed).
- ○ Developed a React-based meta framework, reduced the cost of cross-team integrations by ~80%.
- ○ Crafted data-driven AWS usage guidelines, enforced company-wide for ~$1.8M in annual cost savings.

Optyx (Acquired by Zenfolio) *JavaScript, Python, C++, TensorFlow, OpenCV*   September 2018 - October 2021

Founder, CEO, Principal Software Engineer

- ○ Developed Optyx App, an AI culling desktop app that automatically selects the best photographs from an event using custom, lightweight CV models, trusted by thousands of professional photographers.
- ○ Managed a fully distributed team of ~10 ICs responsible for sales, marketing, design, and product.
- ○ Drove the product from concept to product-market fit and eventual acquisition despite significant headwinds: an app focused on live events launching in the first week of March 2020 (pre-pandemic).

Eris Ventures *JavaScript*   September 2018 - October 2021

Fractional CTO, Staff Engineer-for-Hire, OSS Maintainer

- ○ Founded a software engineering and open-source solo consultancy, generating $1M+ EBITDA.
- ○ Served as staff engineer-for-hire for big tech and as fractional CTO for early stage startups.
- ○ Developed a reputation as a leading expert on JavaScript and web performance (media coverage, academic citations, W3C TPAC Performance WG invited expert, training requests from Fortune 500).
- ○ Co-author of the 2019 Web Almanac (~126k readers, ~20 academic citations).
- ○ Created and maintained npm packages depended on by more than 200k public projects, with ~30M monthly downloads, and contributions from ~400 individuals.

Google *JavaScript, C++*   November 2016 - September 2018

Software Engineer, Tech Lead   September 2017

- ○ Tech lead for Project Lantern, a browser simulation initiative used by Google Search (PageSpeed).
- ○ Maintainer of Lighthouse, the canonical open source performance measurement tool for web developers (1M+ MAUs, 23k stars) and embedded by dozens of other developer tools (including Chrome, PageSpeed Insights, WebPageTest, Calibre, SpeedCurve, Treo, GTMetrix).
- ○ Developer advocate in the OSS community, propelled the project to 1M+ MAUs from a few thousand.

- Engineer on Chrome and code owner of the Application panel in Chromium DevTools.
- Author of the Performance category in Lighthouse, developed metrics and optimization advice.
- Fostered an inclusive open source community with hundreds of contributors, thousands of pull requests, and 2-hour median issue response times.

Solvvy *JavaScript, Java, Python* November 2015 - November 2016

Lead Software Engineer

- Joined as the first engineer after an enterprise pivot and wore multiple hats: pitching customers, prioritizing product, managing an engineering team, and developing everything across the stack.
- Oversaw all development in the first 6 months, guided UI and API development as the company grew.
- Built administrative console UIs in Angular and React, 16 node.js APIs backed by mongodb, mysql, and redis, distributed real-time computation system for Solvvy's ML & NLP data pipeline backed by rabbitmq with client SDKs in node, python, and java, automatic ansible infrastructure with friendly CLI wrapper around EC2, and more...

BrightRoll (Acquired by Yahoo!) *JavaScript, Scala, Spark, GraphX* January 2015 - November 2015

Engineering Associate August 2016

- Identified as one of Yahoo's top thirteen young software engineers and selected for the Engineering Associates Program by David Filo, co-founder of Yahoo.
- Developed systems in Apache Spark to scale Yahoo's knowledge graph beyond 2B+ entities.

Software Engineer January 2016

- Full-stack engineer on the UI and APIs for the BrightRoll Demand Side Platform (DSP).
- Architect of BrightRoll DSP's v2 search API, decreased CPU usage and error rates 70%.

Multiple Companies *JavaScript, Java, Python, C#, PHP* May 2009 - August 2014

- **Google** · *JavaScript, Java* · Full-stack engineer on Google Photos, architect of the Stories web client.
- **50onRed** · *JavaScript, Python* · Full-stack engineer on 50onRed's advertising administration platform.
- **NextDocs** · *JavaScript, C#* · Full-stack engineer, architect of NextDocs's ETL and Reporting product.
- **Valkyrie Systems** · *JavaScript, PHP* · Full-stack engineer, architect of the PublicationCMS product.

Personal Projects

Mike's Cereal Shack

Creator, Developer https://www.mikescerealshack.co/
- Search engine and meme creator for *The Office*, Next.js app using ffmpeg, Algolia, and custom NLP.

Bardos Foundation

Founder, Computer Science Mentor https://www.bardos.foundation/
- Charitable foundation offering financial aid and guidance to immigrants and refugees in the US.
- $40k+ in aid distributed and dozens of Computer Science students mentored since 2019.

Open Source Contributions

Creator-Maintainer	Maintainer	Contributor
third-party-web, lighthouse-ci, pptr-testing-library, ~20 others	lighthouse, jpeg-js, chrome-launcher, speedline, cuzillion	Chromium, WebPageTest, puppeteer, koajs, jest-image-snapshot, ~10 others

Languages, Frameworks, and Technologies

Extremely Familiar (Recent Heavy Use)	Moderately Familiar (Past Heavy Use)	Somewhat Familiar (Past Light Use)
JavaScript, TypeScript, HTML, CSS React, Jest, Puppeteer, OpenAI APIs	Python, Java, Scala, PHP, SQL, AWS, GCP, TensorFlow, OpenCV, MediaPipe, Redis, MongoDB, Elasticsearch, Thrift, Protobuf	Go, C++, C#, Ruby, Pascal, OCaml, Azure, Puppet, Terraform, PyTorch, Svelte, Spark, Hadoop, Kafka, Airflow