Josh Finnie

Experienced Software Engineer

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Work Experience

Senior Software Engineer <div align="right">May 2023 - Present</div>
People Data Labs <div align="right">*Remote, USA*</div>

Focusing on building scalable APIs and cloud-based solutions that enhance customer interactions with data. Collaborating with design to bring joy to internal users of our Admin Website.

Technologies: Python, Rust, TypeScript, React, AWS, Pulumi, Flask, PostgreSQL

- **API Development:** Led development of scalable RESTful APIs using **Python** and **Flask**, reducing data access issues by 25%.
- **Project Leadership:** Coordinated monthly data update launches between API and Data teams, ensuring seamless and timely releases.
- **SDK Development:** Authored the **Rust** SDK and contributed to multi-language SDKs (**Python**, **Go**, **JavaScript**), improving developer experience.
- **Front-End Development:** Built internal admin interfaces with **React** and **TypeScript** to empower sales and support teams in serving customers efficiently.

Staff Software Engineer <div align="right">May 2022 - Mar 2023</div>
IndigoAg <div align="right">*Remote, USA*</div>

Contributed to Carbon by Indigo, enabling farmers to generate revenue via sustainable practices and verified carbon credits. Collaborated with external partners integrating data into carbon sequestration models.

Technologies: Flask, Python, PostgreSQL, Docker, AWS

- **API Development:** Created a next-generation Carbon Sequestration API with **Flask**, delivering a scalable, high-performance platform that met stakeholder goals.
- **Project Leadership:** Led end-to-end design and implementation of a key third-party integration, collaborating closely with external software teams to ensure smooth onboarding of our customers, resulting in a 35% increase in user adoption.
- **Mentorship:** Guided junior engineers, established engineering best practices, and fostered a culture of continuous improvement.
- **Documentation & Process Improvement:** Authored comprehensive technical docs for company-wide data backfill, boosting operational efficiency and safety by 75%.

Senior Software Engineer <div align="right">Sept 2019 - May 2022</div>
PBS <div align="right">*Crystal City, VA*</div>

Led modernization of backend services for PBS.org, focusing on cloud infrastructure improvements and website functionality enhancements.

Technologies: Django, GraphQL, Apollo Client, AWS, CI/CD, Python

- **Legacy Modernization:** Migrated legacy **Django** systems to cloud-native infrastructure, improving scalability and reducing downtime.
- **GraphQL Architecture:** Designed and implemented **GraphQL** infrastructure with **Apollo Client**, streamlining content distribution across teams cutting payloads by 80%
- **Internal Tooling**: Helped develop an internal tool written in **Go** that helped engineers spin up new microservices quickly and accurately.
- **Security Enhancements:** Improved code quality and security by implementing automated testing pipelines and conducting regular security audits.

Senior Software Engineer   Aug 2019 - Mar 2024

TrackMaven → Skyword   Washington, DC

Joined TrackMaven as the fourth engineer, contributing full-stack to a leading social media management platform; led integration with Skyword post-acquisition.

Technologies: Django, Python 3, JavaScript, React, Kubernetes, Terraform

- **User Integration & Authentication:** Developed unified login microservice in **Django** syncing authentication for 1000+ users, enhancing security and UX.
- **Language & Framework Upgrades:** Led migration from Python 2 to **Python 3** and CoffeeScript to modern **JavaScript**/**React**, improving maintainability and performance.
- **Leadership & On-Call Support:** Directed Quality and Infrastructure team, enforcing robust engineering standards and ensuring mission-critical service stability.
- **Security & Infrastructure:** Implemented security best practices with **Snyk**, **Dependabot**, **GitHub Security Hub**, and co-led Kubernetes infrastructure design using **Terraform**.

Application Developer   Feb 2012 - Mar 2014

KoanSys, LLC   Arlington, VA

First hire at an engineering consulting firm; contributed across contracts including legacy migrations and development of NASA's Interactive Satellite Tracker (iSat).

Technologies: JavaScript, Ansible, AWS, Django, Drupal

- **iSat Development:** Developed Interactive Satellite Tracker using **JavaScript** that calculates real-time satellite positions for Science@NASA.
- **Cloud Migration:** Architected and automated CMS migration from **Django** to **Drupal** on **AWS** with **Ansible** scripts.

Technical Skills

Programming Languages: Python, Rust, JavaScript (ES6+), TypeScript, Go, SQL

Frameworks & Libraries: Flask, Django, React, Apollo Client, GraphQL

Cloud & Infrastructure: Amazon Web Services, Kubernetes, Pulumi, Terraform, Docker, Ansible

Databases: PostgreSQL, MySQL, MongoDB

Tools & Platforms: Git, GitHub Security Hub, Snyk, Dependabot, CI/CD Pipelines

Other: RESTful API Design, SDK Development, Automated Testing, Security Audits, Agile/Scrum

Highlighted Personal Projects

HireTrax   https://hiretrax.app

Building a job application tracking tool for people in the software development space. Using **Next.js** and **Supabase**, I was accepted into the Buildspace Nights & Weekends program and built a working prototype in 6 weeks.

WASM Frontmatter   https://www.npmjs.com/package/wasm-frontmatter

A clone of the NPM package grey-matter written in **Rust**. The project is used to generate **Wasm** code and is released on NPM. My tests have found that Wasm-Frontmatter is 3x faster than the javascript equivalent.

Education

University of Maryland - Global Campus

Master of Science in Data Analytics (Expected 2027)

Central Connecticut State University

Classes towards a Master of Science in Geography (GIS Track)

University of Connecticut - Storrs

Bachelor of Arts in Economics (Certificate in Quantitative Economics & Minor in Mathematics)