Josh Finnie

Experienced Software Engineer

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With over 10 years of experience in software engineering, I specialize in building scalable APIs, interactive websites, and optimizing internal team processes. My career demonstrates a commitment to technical excellence, innovative problem-solving, and leadership in developing robust software solutions. I combine deep technical expertise with a passion for mentoring and process improvement, driving both project success and team growth.

WORK EXPERIENCE

Senior Software Engineer   May 2023 - Present
People Data Labs | Remote

Lead back-end engineer focused on building scalable APIs and cloud-based solutions that enhance customer interactions with data.
Technologies: Python, AWS (RDS, Elasticache, Lambda, Batch) Docker, Pulumi, Rust, Go

- API Development: Leading the development of RESTful APIs, reducing data access issues by 25%.

- Project Leadership: Act as captain for monthly data update launches, coordinating efforts between the API team and the Data team to ensure seamless updates.

- SDK Development: Authored the Rust SDK, contributing to SDKs across multiple languages to improve developer experience.

Staff Software Engineer   May 2023 - Mar 2023
IndigoAg | Remote

Contributed to Carbon by Indigo, a platform enabling farmers to generate revenue through sustainable farming practices and verified carbon credits. Collaborated with external partners to integrate their data into carbon sequestration models.
Technologies: Python, JavaScript, AWS RDS

- API Development: Designed and developed the next-gen Carbon Sequestration API using Flask, delivering a scalable and high-performing solution that met stakeholder requirements.

- Project Leadership: Spearheaded the project lifecycle, from initial architecture design to deployment, increasing user adoption of the carbon sequestration platform by 50%.

- Mentorship and Team Development: Mentored junior engineers, established engineering best practices, and fostered a collaborative environment focused on continuous improvement.

- Technical Documentation and Process Improvement: Authored detailed technical documentation to support company-wide data backfill processes, improving operational efficiency by 20%.

Senior Software Engineer   Spet 2019 - May 2022
PBS | Crystal City, VA

Led modernization of backend services for PBS.org, focusing on improving cloud infrastructure and enhancing website functionality.
Technologies: Python, Docker, AWS (ECS, ECR) JavaScript, GraphQL, Go

- Legacy Modernization: Spearheaded modernization efforts, migrating from legacy Django to cloud-native infrastructure, improving scalability and reducing downtime.

- GraphQL Architecture: Designed and implemented a GraphQL endpoint to improve content distribution efficiency across multiple teams.

- Security Enhancements: Enhanced code quality and security across projects by implementing automated testing pipelines and security audits.

Senior Software Engineer   Mar 2024 - Aug 2019

TrackMaven → Skyword | Washington, DC

Joined TrackMaven as the fourth engineer, contributing to both backend and frontend development for a leading social media management company. Post-acquisition, played a pivotal role in integrating TrackMaven's platform with Skyword.

Technologies: Python, JavaScript, PostgreSQL, AWS (Full Suite), Redis, Docker, Kubernetes, Terraform

- User Integration & Authentication: Led the development of a unified login microservice in Django, synchronizing authentication for 1000+ users between TrackMaven and Skyword platforms, improving security and user experience.
- Programming Language Updates: Led the migration of TrackMaven's core app to Python 3 for improved performance and sustainability. Established testing protocols to transition the web app from CoffeeScript to modern JavaScript, enhancing maintainability and performance.
- Leadership & On-Call Support: Led the Quality and Infrastructure team, promoting robust engineering practices, and served on-call to ensure the stability of mission-critical services.
- Security & Infrastructure Enhancements: Implemented security best practices using tools like Snyk, Dependabot, and GitHub Security Hub, and co-led the architecture for Kubernetes infrastructure using Terraform, streamlining deployments.

Application Developer   Feb 2012 - Mar 2014

KoanSys, LLC | Arlington, VA

As the first hire at an engineering consulting firm, contributed to multiple contracts, ranging from migrating web software to current best practices to developing an Interactive Satellite Tracker (iSat) for Science@NASA.

Technologies: Python, JavaScript, Drupal, AWS (EC2, S3, Route53, Cloudfront, API Gateway), Ansible

- iSat Development: Developed and deployed the Interactive Satellite Tracker (iSat), a JavaScript application that calculates real-time satellite positioning using open-source data for Science@NASA.
- Cloud Migration: Designed and built cloud infrastructure and automated migration scripts using Ansible, transitioning Science@NASA's Content Management System from Django to Drupal and moving it to Amazon Web Services.

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.

My personal blog   https://www.joshfinnie.com

My personal blog written in Typescript using the Astro.build framework. It takes advantage of Tailwind CSS, ShadCN and is hosted on Netlify for high-availability. I write about my learnings in software development and tutorials.

More open-source projects found at https://github.com/joshfinnie/

EDUCATION

University of Maryland - Global Campus
Master of Science: Data Analytics (Expected 2026)

Central Connecticut State University
Classes towards a Master of Science: Geography (GIS Track)

University of Connecticut - Storrs
Bachelor of Arts: Economics. (Certificate in Quantitative Economics & Minor in Mathematics)