

Kailee Madden

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Senior Software Engineer / Team Lead | Backend, Infrastructure, & Fullstack

WORK EXPERIENCE

Atrius – Remote

Team Lead / Senior Software Engineer · Mar 2025 – Present
Software Engineer · Dec 2022 – Mar 2025

- Owned backend architecture and delivery for core navigation and data systems, setting technical direction for a 5-engineer team, mentoring junior engineers, and partnering with product to balance feature velocity, system reliability, and long-term maintainability.
- Reduced read latency by 75% (9s → 2s) by leading a zero-downtime migration of the primary application datastore from Amazon DocumentDB to DynamoDB using a custom abstraction layer, asynchronous dual writes, and feature-flagged cutover.
- Enabled real-time detour-aware navigation for ~750K daily users by ingesting customer-submitted API events, persisting state in a backend service, and dynamically disabling nodes in the frontend navigation graph to reroute around airport closures and construction.
- Led the redesign of internal and customer authentication by federating Azure AD into AWS Cognito for single sign-on, implementing a post-confirmation Lambda to assign scoped read-only permissions, enforcing SSO-only access, and updating the login experience for secure, consistent access.
- Cut deployment time from ~1.5 hours to ~15 minutes across 15+ services by migrating backend services and shared libraries into a standardized TypeScript TurboRepo monorepo with standardized linting/testing, fully implemented infrastructure-as-code, and shared CI/CD templates.
- Unlocked safe customer self-service for point-of-interest data by designing and building production APIs with authentication, rate limiting, and validation, enabling automated CMS-driven updates without manual engineering intervention.
- Maintained mean time to resolution under 2 hours by enforcing clear ownership of Datadog alerts, ensuring each alert resulted in a fix, refinement, or incident response.

Intel – Remote

Cloud Software Development Engineer Intern · Jun 2022 – Aug 2022

- Automated server health checks using Python, PowerShell, and Bash to verify BIOS settings and installations, and developed C++ tests to track executable power consumption.

Deloitte Consulting – San Diego, CA

Data Scientist and Data Engineer Consultant · Sept. 2019 – Sept. 2021

- Engineered high-throughput Python and SQL ETL pipelines processing 10M+ records daily.
- Led a team of 3 engineers to deliver predictive maintenance analytics using k-means clustering and logistic regression, reducing unplanned aircraft maintenance by 30% for San Diego naval aviation.

EDUCATION

University of California San Diego – M.S., Computational Science, Mathematics & Engineering · Dec. 2022

University of Notre Dame – B.A., Mathematics & History · May 2019

SKILLS

Languages & Frameworks: TypeScript, JavaScript, C# (.NET), Python, SQL, Node.js, React

Cloud & Infrastructure: AWS, Azure, Terraform, Serverless Framework, Docker, Redis, PostgreSQL, MongoDB

Systems & Practices: Microservices, REST API design, Authentication/Authorization, CI/CD, WCAG 2.1 AA