

Caroline Fairhurst

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Software developer with over 3 years of experience designing, engineering, and scaling backend systems in cloud environments. Led migration project with VP of Technology to transition from monolithic architecture to an AWS serverless, event-driven microservices backend. Achieved 99% reduction in data latency and 30% decrease in regressions. Work on a fast-paced innovation team, prototyping and launching AI-powered tools to automate workflows and support natural language interfaces with business data.

WORK HISTORY

Kaplan North America, Remote

July 2018 - Current

Software Developer II – Cloud

January 2025 - Current

- **Migrated 2.5 million production records while maintaining 100% uptime**, consolidating user data across multiple aliases into a single unified contact ID to enhance data integrity, analytics, and the customer experience.
- **Engineered a recommendation chatbot integrating business data and LangChain**, recommending prospective students to relevant courses based on expressed interests.
- **Selected for and completed the "Emerging Leader Program"**, a leadership development program focused on strategic communication, team leadership, and cross-functional collaboration.

Software Developer – Cloud

March 2023 - January 2025

- **Automated user management, course creation, and analytics workflows in Canvas LMS**, eliminating the need for a part-time operational role and improving scalability.
- **Led cross-functional AI initiatives, including automated video transcription**, reducing manual labor and saving 30+ hours per content production cycle.
- **Developed a full-text search system for the user base**, enabling support agents to locate users across multiple identifiers and significantly accelerating ticket resolution times.

Associate Software Developer – Cloud

November 2021 - March 2023

- **One of two engineers leading the migration from a monorepo to an event-driven microservices architecture on AWS**, reducing data latency by 99% and cutting production regressions by 30%.
- **Resolved hundreds of support tickets**, maintaining an average response time of 4 hours and contributing to improved user satisfaction.
- **Enhanced an internal React admin dashboard**, centralizing admissions workflows, inventory management, and user lookup to streamline operations for cross-functional teams.

SKILLS

- **Programming:** JavaScript (Node.js, React, Typescript), Python
- **Cloud & DevOps:** AWS (Lambda, CloudFormation, Cognito, API Gateway), Docker
- **Data Engineering:** DynamoDB, Elasticsearch, SQL
- **Architecture:** Microservices, Event-Driven Architecture, RESTful APIs
- **AI & Machine Learning:** LangChain, Amazon Bedrock, OpenAI API, Claude API, Retrieval-Augmented Generation (RAG)
- **Third-Party APIs:** Canvas LMS, Stripe, Frame.io

EDUCATION & CERTIFICATIONS

Bachelor of Science in Computer Science January 2021
Stockton University, Galloway, New Jersey

- **Summa Cum Laude | 3.92 GPA | Honors Student**