

Katherine Shen

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+1 (443) 766-2382 – U.S. Citizen

EXPERIENCE

Amazon Web Services

Software Development Engineer - OpenSearch Ingestion

Austin, TX

July 2024 – Present

- Led development of a streamlined pipeline creation interface, driving a complete reduction in configuration errors and a 40% increase in pipeline adoption and revenue
- Actively partnered in UX development by providing domain-driven feedback that directly shaped and informed final design decisions
- Created API-driven, schema-based UI generation to cut manual effort by 50% while avoiding schema mismatches
- Implemented configuration-aware React/TypeScript UI that surfaces required permissions during pipeline construction, eliminating customer issues from incorrect permissions
- Authored a detailed threat model to ensure secure design and built comprehensive production canaries for OTLP ingestion source in Java, resulting in rapid customer adoption two weeks after release
- Designed an automated image vulnerability detection system using AWS Lambda, DynamoDB, ECR, and SQS, preventing deployment of vulnerable dependencies into production environments
- Contributed to open-source Data Prepper repository by implementing the modulo operator in its expression language, providing customers with more flexible data processing configurations
- Identified and resolved a critical pipeline lifecycle bug where orphaned table resources prevented pipelines from ingesting data properly

Amazon Web Services

Software Development Intern - OpenSearch Ingestion

San Francisco, CA

May 2023 – Aug 2023

- Deployed features for advanced key-value extraction of real-time data to production environments
- Improved data ingestion tool's capabilities to transform data by increasing data processing functionality
- Enhanced customer ability to collect observability data by expanding configurations for the key-value processor
- Implemented user options in Java to select key-value pairs, mutate values, and recursively parse input data

Vertically Integrated Projects

Atlanta, GA

Getting to Know U - Provost Data Dashboard Design

Aug 2022 – Dec 2023

- Led subteam for large scale project to provide student body with information on classes, majors, clubs, etc.
- Managed and conducted code reviews for 8 engineers transitioning design wireframes to a user-friendly webapp

Georgia Tech Research Institute

Atlanta, GA

Research Software Engineering Intern

May 2022 – May 2023

- Spearheaded development of AI model visualization tool using React, Python, and custom data architecture
- Transitioned emergency procedure manual iPad application to React webpage with improved user experience

Johns Hopkins University Applied Physics Lab

Laurel, MD

Software Engineering Intern

Jun 2018 – Jun 2020

- Reduced average time for locating parking spot on APL campus with OpenCV and image recognition
- Experimented with relationships between emotional context and television subtitles using NLP techniques
- Developed lost device tracking system with Raspberry Pi by building Pseudo-GPS system with WiFi networks

SKILLS

Programming: Python, Java, TypeScript, JavaScript, HTML/CSS, SQL, C, L^AT_EX

Tools: Kiro, Cline, Figma, Notion, Git, Adobe Photoshop

Technologies: React, AWS DynamoDB, AWS CloudWatch, AWS Step Functions, AWS CDK, Websockets, API

Languages: English (native), Chinese (fluent), Korean (beginner)

EDUCATION

Georgia Institute of Technology

Atlanta, GA

Bachelor's of Science in Computer Science, GPA: 3.73

Aug 2020 – May 2024

Concentration: Graphics & Networking

Courses: Computer Networking, Information Security, Information Visualization, Systems and Networks, Databases, Algorithm Design, Computer Graphics, Computer Architecture, Linear Algebra, Data Structures & Algorithms