

# Katherine Shen

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## EXPERIENCE

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### Amazon Web Services

Austin, TX

*Software Development Engineer - OpenSearch Ingestion*

*July 2024 – Present*

- Led development of a streamlined pipeline creation interface, driving a complete reduction in configuration errors and adoption by 1.5K pipelines (33% of total created pipelines)
- Accelerated frontend development by introducing schema-driven UI generation, reducing manual effort by 50%
- Implemented configuration-aware UI that surfaces required permission options during pipeline construction
- Engineered and performance-tested infrastructure for supporting OTLP ingestion source, achieving rapid adoption with 100 pipelines created within two weeks
- Designed an automated image vulnerability gating system using AWS Lambda, DynamoDB, ECR, and SQS, reducing operational overhead from retroactive patching

### Amazon Web Services

San Francisco, CA

*Software Development Intern - OpenSearch Ingestion*

*May 2023 – Aug 2023*

- Deployed advanced key value processor to production environments for use in AWS OpenSearch
- 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
- Standardized design systems after rigorous UX audit of existing dashboard designs for future dataset visualization

### 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
- Developed Python script to parse styling information from Excel sheet database in order to render on webpage

### 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

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**Programming:** Python, Java, JavaScript, TypeScript, HTML/CSS, SQL, C,  $\text{\LaTeX}$   
**Tools:** Figma, Notion, Git, Adobe Photoshop  
**Technologies:** React, AWS DynamoDB, AWS CloudWatch, Websockets, API, Event Handling, Flask  
**Languages:** English (native), Chinese (fluent), Korean (beginner)

## EDUCATION

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### 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*