

Yufei Qiu

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EDUCATION

Purdue University

Master of Computer Science

West Lafayette, IN

Jan. 2024 – Dec. 2025

Purdue University

Bachelor of Computer Science, Minor in Mathematics (GPA: 3.65)

West Lafayette, IN

Aug. 2021 – Dec. 2024

EXPERIENCE

Amazon Web Services (AWS) – Software Development Engineer Intern

May 2025 – Aug. 2025

Secrets Manager

Seattle, WA

- Shipped metrics surfacing idle usage patterns across 50M+ secrets, enabling up to \$48M in potential annual cost savings for AWS customers.
- Built an integrated CloudWatch-powered dashboard in the Secrets Manager console, delivering operational insights to millions of customers to improve security posture of customers' service.
- Designed and implemented a **customer-facing metrics platform** for usage monitoring and cost optimization, improving observability into secret rotation activity and idle storage.

Kohl's – Software Engineering Intern

June 2024 – Aug. 2024

Return's team

remote

- Productionized 5+ backend features in Spring Boot microservices, including support for item returns to original payment cards.
- Migrated SOAP-based API endpoints to REST, modernizing system integration and reducing technical debt.
- Refactored legacy modules to improve maintainability and scalability, and implemented caching to reduce redundant backend calls.
- Developed and maintained unit/integration tests, and resolved critical bugs in teammate-authored features.

Full Stack Developer – No Limit LLC (Capstone)

Aug. 2023 – May 2024

Purdue University

West Lafayette, IN

- Led backend development across 16 Agile sprints, designing REST APIs and managing MongoDB database operations.
- Developed forum functionality and integrated frontend with backend using Node.js and React.
- Collaborated directly with CEO and product owner to align technical deliverables with business priorities.

PROJECTS

Music Genre Classification with LLMs

May 2025

BERT + LSTM/GRU with GloVe embeddings

- Built a multi-class genre classifier for 10K+ song lyrics using transformer and recurrent architectures.
- Fine-tuned and benchmarked models on accuracy, achieving 73% with error analysis for model robustness.

Networking Router with DHCP and NAT

May 2025

C-based Router Implementation

- Implemented a NAT router in C using raw sockets for IP packet forwarding between interfaces.
- Developed a custom DHCP server with lease management and persistent IP assignment.
- Managed NAT table with port mapping and timeout handling for ICMP, TCP, and UDP protocols.

Scala Compiler with Optimizations

Dec. 2024

Custom Compiler Design and Implementation

- Developed a Scala compiler with Continuation-Passing Style (CPS) translation and multiple optimization passes.
- Implemented arithmetic operations, error handling, type checking, memory allocation, and garbage collection.

TECHNICAL SKILLS

Programming Languages: Java, Python, C/C++, SQL, JavaScript, R

Frameworks & Tools: Spring Boot, React, Node.js, AWS (CloudWatch, Lambda, S3), Git, MongoDB, Docker, VS Code, IntelliJ

Libraries & Data: HuggingFace, Pytorch, pandas, NumPy, Matplotlib

Methodologies: Agile/Scrum, CI/CD, Test-Driven Development (TDD)