Yufei Qiu

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EDUCATION

Purdue University   West Lafayette, IN
Bachelor of Computer Science, Minor in Mathematics (GPA: 3.65)   *Aug. 2021 – Dec. 2024*

Purdue University   West Lafayette, IN
Master of Computer Science   *Jan. 2024 – Dec. 2025*

EXPERIENCE

Software Development Engineer Intern   May 2025 – Aug. 2025
Amazon Web Services (AWS) – Secrets Manager   *Seattle, WA*

- Designed and implemented a customer-facing metric system using Amazon CloudWatch to improve observability and cost efficiency.
- Built an integrated dashboard in the Secrets Manager console, exposing operational and billing insights to millions of customers.
- Shipped metrics surfacing idle usage patterns across 50M+ secrets, enabling up to $48M in potential annual cost savings for AWS customers.

Software Engineering Intern   June 2024 – Aug. 2024
Kohl's   *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 to modernize system integration and reduce tech debt.
- Refactored legacy application modules to improve maintainability and scalability.
- Implemented caching to reduce redundant backend calls and improve system performance.
- Wrote unit and integration tests; fixed critical bugs in teammate-authored features.

Full Stack Developer – No Limit LLC (Capstone)   Aug. 2023 – May 2024
Purdue University   *West Lafayette, IN*

- Led backend team across 16 agile sprints, designing APIs and managing MongoDB database operations.
- Developed forum functionality and integrated frontend with backend using Node.js and React.
- Collaborated with the CEO and product owner to align development goals with business needs.

PROJECTS

Music Genre Classification with LLMs | *Python, HuggingFace, PyTorch*   May 2025
Classified song lyrics using transformer and recurrent models

- Built a genre classifier using BERT and LSTM/GRU with GloVe embeddings on a dataset of 10K+ song lyrics.
- Fine-tuned transformer and recurrent models on multi-class genre labels; compared performance across architectures.
- Achieved 73% accuracy; conducted error analysis to improve classification robustness.

Networking Router with DHCP and NAT | *C*   May. 2025
Built a software router with full NAT and DHCP functionality in C

- Implemented a NAT router in C using raw sockets, forwarding IP packets between interfaces.
- Built a custom DHCP server with lease management and persistent IP assignment across client reboots.
- Managed NAT table with port mapping and timeout logic for ICMP, TCP, and UDP protocols.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, JavaScript, R
Frameworks & Tools: Spring Boot, React, Node.js, JUnit, AWS, Git, MongoDB, VS Code
Libraries: HuggingFace Transformers, pandas, NumPy, Matplotlib