

SHU HAN (GINNY) GUO

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EDUCATION

University of Toronto

2020 – 2026

B.A.Sc. in *Engineering Science* (Major in *Machine Intelligence*) + PEY Co-op

Courses: Deep Learning | Machine Learning | Machine Intelligence, Software & Neural Networks
AI for Robotics | Decision Support Systems | Computer Security | Data Structures & Algorithms
Operating Systems | Data Mining | Databases | Probabilistic Reasoning | Matrix Algebra &
Optimization | Limits of Machine Intelligence | Accounting & Finance | Economic Analysis &
Decision Making

Thesis: Research & develop ML solutions for intelligent and interactive buildings with *Prof. Seungjae Lee*.

Capstone: Build recommendation agent with scraped event platform data with *Human Feedback Foundation*

CORE COMPETENCIES

Languages: Python | SQL | Java | JavaScript | C/C++ | TypeScript | Linux & Bash Scripting | HTML/CSS
Frameworks: PyTorch | TensorFlow | Spark | Kafka | scikit-learn | Dropwizard | Spring | ReactJS | NodeJS
Tools: AWS | GCP | Jupyter | Git | Docker | Kubernetes | Kafka | Elasticsearch | Liquibase | Firebase | Grafana

WORK EXPERIENCE

SOFTWARE ENGINEER INTERN – AMAZON (PAYMENTS)

May 2024 – Aug 2025

- Built a forward-thinking document retrieval chat agent in **Python** & **Typescript** using **AWS Bedrock**
- Created ML infrastructure in **AWS** with **OpenSearch Serverless**, with vector indexing and **Titan-v2**
- Automated document ingestion into **Amazon Bedrock Knowledge Base** with data pipeline & **bash** script
- Applied **RAG** techniques with conversation history using system prompts for **gpt-oss-120b LLM**
- Designed & built chatbot UI in **TypeScript** for internal clients to ask context-specific questions
- Worked with team to build infra that publishes DynamoDB to Kinesis streams for business analytics

SOFTWARE DEVELOPER INTERN – KIJJI (AN ADEVINTA COMPANY)

May 2023 – Aug 2024

- Worked as a backend engineer to develop features, write tests, create alerts, resolve bugs, and improve code quality for **RESTful Java Dropwizard** & **Spring** APIs, microservices, and API gateways on **GCP**
- Designed multi-threaded cron job migrating over 40,000 mobile & webapp user notification subscriptions
- Migrated microservices with **DevOps** to cloud using **Terraform** & **Atlantis** and added log correlations
- Enhanced platform billing & monetization features using **Liquibase** & **SQL**, increasing ad revenue by 20%
- Engaged in **Cybersecurity** trainings and workshops on **Observability** and **OpenTelemetry**

OTHER

ECE MEMBER & PROJECT LEAD – SPARK DESIGN CLUB

Sept 2020 – May 2021, May 2022 – Aug 2024

- Designed and prototyped mechatronic interactive displays around the University of Toronto campus
- Led ECE teams to design & debug software programs using **Arduino** with **Github** for revision control
- Designed digital circuits on hardware & **TinkerCAD** simulations & PCBs with **EAGLE** for software programs
- Developed rhythm-game with **Unity** & C++, running on arm64 and connected to external controllers