# Muyang Li

**Phone:** (607)697-5055 **Email:** ml2855@cornell.edu **LinkedIn:** www.linkedin.com/in/ml2855/

## EDUCATION

**Cornell University**. Ithaca, NY. Aug 2024 – Dec 2025
M.Eng. in Electrical and Computer Engineering, **GPA**: **4.0**.
- Relevant Coursework: Intro to Database System, Software Engineering

**Dalian University of Technology**. Dalian, China. Sep 2020 – Jun 2024
B.Eng. in Software Engineering, **GPA**: **3.8**.
- Awards: National Academic Scholarship (2021, 2022)
- Relevant Coursework: Data Structure and Algorithm, Operating System, Database System, Computer Organization and Structure

## SKILLS

- **Expertise**: Backend & Frontend Development, Database Management, API Design, Distributed Systems, CI/CD
- **Programming Language**: Java, Python, C++, Go, JavaScript, SQL, Scala, R, HTML, CSS
- **Tools** & **Frameworks**: Spring Boot, Django, React, MySQL, PostgreSQL, MongoDB, Redis, TensorFlow, Docker, AWS, Git

## EXPERIENCE

**Cornell University**. Ithaca, NY. Oct 2024 – Present
*Research Assistant on Neural Network Compression, Advisor: Professor Aaron B. Wagner*
*Tech Stack: **Python**, **Flask**, **Celery**, **PostgreSQL**, **GitHub Actions**, **REST API**, **TensorFlow**, **Linux**, **CI/CD**.*
- Optimized image storage and retrieval by designing a PostgreSQL-based pipeline for 50,000+ high-resolution images, reducing query latency by 45% (from 255ms to 140ms).
- Built a distributed image compression system using Flask & Celery, scaling concurrent processing 3x and cutting queue wait time from 5 min to <1 min.
- Automated CI/CD for model training and deployment with GitHub Actions, reducing deployment time from 2 hours to 15 minutes, enabling faster iterations.

**Dalian Cloud Data Technology Co., Ltd**. Dalian, China. Dec 2023 – Mar 2024
*Software Engineer Intern on Cloud Resource Monitoring & Alert System*
*Tech Stack: **Python**, **Flask**, **REST API**, **MySQL**, **Redis**, **SMTP**, **Cloud API**, **CI/CD**.*
- Developed a cloud monitoring and alert system with a cross-functional team of 5 engineers, tracking 250+ cloud servers by integrating REST APIs & cloud provider APIs for real-time metric analysis, improving system reliability.
- Optimized the alert pipeline with SMTP-based email & SMS notifications, reducing alert delivery time 56% (3.2s to 1.4s) and cutting incident downtime by 45%.
- Reduced server costs by 12% through resource allocation optimization, achieving over $3,000 annual savings.

## PROJECTS

**Personalized Twitch Resources Recommendation Engine**. Dec 2023 – Mar 2024
*Tech Stack: **Java**, **Spring Boot**, **React**, **MySQL**, **Redis**, **REST API**, **Docker**, **AWS**, **CI/CD**.*
- Designed and implemented a Spring Boot backend with MySQL, optimizing query performance and reducing response time by 35% (200ms to 130ms) through indexing and caching.
- Optimized a collaborative filtering recommendation algorithm, reducing processing time from 11.8s to 9.7s for 10,000 videos and 100 users, achieving a 17.8% efficiency boost.
- Deployed the system using Docker and AWS, automating CI/CD pipelines via GitHub Actions, cutting deployment time from 30 min to 13 min, ensuring seamless integration and continuous updates.

**E-commerce System**. Jul 2023 – Aug 2023
*Tech Stack: **Java**, **Spring Boot**, **Vue.js**, **MySQL**, **Redis**, **Elasticsearch**, **REST API**, **Docker**, **AWS**.*
- Led backend development of a full-stack e-commerce system, designing and implementing the shopping cart, order management, and authentication modules using Spring Boot & MySQL.
- Optimized system performance by integrating Elasticsearch for search (-42% latency) and Redis for caching (-44% backend response time) under high traffic.

**College Admission Management System**. Aug 2022 – Sep 2022
*Tech Stack: **Java**, **Spring Boot**, **MySQL**, **JDBC**, **Redis**, **REST API**.*
- Developed backend for a college admission management system, implementing student registration, application submission, and result management with Spring Boot & MySQL.

**Lossy Audio Compression Algorithm Design**. Oct 2024 – Dec 2024
*Tech Stack: **Python**, **NumPy**, **SciPy**, **Huffman Coding**, **DCT**, **Signal Processing**.*
- Led a two-person team to develop a lossy audio compression algorithm, reducing WAV file size while ensuring high audio fidelity under a specified distortion limit.
- Collaborated on optimizing Discrete Cosine Transform (DCT) and Huffman coding, achieving an 8.81:1 compression ratio and a final compressed size of 74,057 bytes, while maintaining an MSE of 0.0048.
- Coordinated performance testing and refinements, ensuring the algorithm met all constraints, with a decompression time of 0.17s for real-time playback feasibility.