Austin Ma

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Education

Illinois Institute of Technology, Chicago, IL *May 2025*

- M.S. in Computer Science
- **Relevant Coursework:** Advanced Database Organization, Computer Networks, Software Quality Management, Data-Intensive Computing

Providence University, Taichung, Taiwan *May 2022*

- B.E. in Computer Science and Information Engineering

Skills

Programming:	Python, Java, R, C#.
Databases:	PostgreSQL, MySQL
Cloud & DevOps:	AWS, GCP, Docker, CI/CD, Nginx, VMware ESXi, Github.
Tools & Tech:	REST API, Spring Boot, Maven, Java SE, Bootstrap 5, Unity, Flutter.
Languages:	English, Mandarin, Taiwanese

Projects

Multi-Class Classification on High-Dimensional Data (Python) *Dec 2024*

- Processed a large real-world dataset with 1.3M entries with 16 features.
- Improved accuracy from 33.3%(baseline) to 75% through feature engineering, PCA, hyperparameter tuning, data standardization, feature selection, and cross-validation.
- Trained and optimized models including Random Forest, XGBoost, and Neural Networks, achieving 75% accuracy.
- Designed an end-to-end machine learning pipeline, incorporating data cleaning, standardization, feature engineering, and ONNX integration for efficient model deployment.

Elderly Care Voice Recognition System (Graduation Project, Java) *Jun 2022*

- Developed a real-time voice recognition system using Java SE and CMU Sphinx, integrating the **LCS** algorithm for emergency sound detection with 95% accuracy.
- Designed and developed a web-based management platform using PHP, JavaScript, and Bootstrap, allowing remote monitoring and control of multiple Raspberry Pi devices, with real-time detection logs stored in PostgreSQL and managed via a REST API built with Spring Boot.
- Implemented real-time SMS and email notifications using Twilio API and SMTP Server, ensuring timely alerts to family members and medical personnel, while managing dependencies with Maven and enabling automated CI/CD deployment via GitHub Actions and Docker.

Binance Trading Bot (Python) *Jul 2022*

- Developed a scalable architecture for a trading bot using Python and the Binance API, enabling seamless addition/removal of trading pairs and flexible strategy adjustments.
- Implemented real-time data processing with WebSockets and asynchronous programming, ensuring low-latency trade execution.
- Designed and integrated a REST API to interact with Binance API for market data retrieval, PostgreSQL for trade data management, and Telegram API for real-time trade alerts.

Unity Game Development Hackathon (C#) *Jul 2021*

- Developed a 2D side-scrolling game prototype using Unity 2D Physics, Input System, and Animation System, ensuring smooth player movement, interaction, and responsive animations.
- Implemented an interactive event-driven system to synchronize game mechanics, UI elements, and audio, enhancing player experience with real-time feedback.
- Delivered a functional prototype within Hackathon constraints, outperforming 70% of participants and earning Honorable Mention.

Honors and Achievements

- **1st Place**: Interdepartmental Image Recognition Competition (*Lane Detection Project*), Providence University — 2021
- **Honorable Mention**: Unity Game Development Hackathon — 2021