

Yu-Chia (Aaron) Chen

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Education

Rice University

Houston, Texas

Master of Computer Science with specialization in Systems & Security

Aug. 2022 – Present

- Courses: Parallel Computing, Web Development and Design, Algorithms, Computer Architecture

National Taiwan University

Taipei, Taiwan

Bachelor of Arts in Economics

Sept. 2017 – June 2021

Work Experience

Microsoft Corporation

Taipei, Taiwan

Software Engineer Intern

July 2020 – July 2021

- Built a deep learning-based fan anomaly detection model with 99% accuracy in the production stage
- Designed dataflows of 300TB+ monthly data for business analytics with Azure Synapse and Databricks
- Coordinated and Lectured 10+ Azure Machine Learning workshops for 150+ engineers

Research Experience & Publications

National Ilan University - Multimedia & Intelligent Technical Laboratory

Ilan, Taiwan

Supervisor: Prof. Chih-Hsien Hsia (Computer Science and Information Engineering)

Dec. 2020 – July 2022

- **Yu-Chia Chen**, Sin-Ye Jhong, and Chih-Hsien Hsia, "RSU-Based Unknown Object Detection in Adverse Weather Conditions for Smart IoT," ACM Transactions on Management Information Systems (TMIS), 2021. (In press)
- **Yu-Chia Chen**, Zih-Ching Chen, and Chih-Hsien Hsia, "Music Mood Classification System for Streaming Platform Analysis via Deep Learning-Based Feature Extraction," in Proceedings of the IEEE International Conference on Consumer Electronics - Taiwan (ICCE-TW), 2021.

Projects

Data Structure Visualizer | Node.js, React.js, MongoDB, Azure Cloud Services

Final Project: Web Programming

- Created advanced visualization tools to help people who love to learn data structure to learn efficiently visualized 8 data structures and ten sorting algorithms
- Accelerated website released rate and boosted code quality with CI/CD pipelines on Azure

Music Recommendation System | Python: Scikit-learn, Xgboost, Flask

Final Project: Capstone Project for Data Science and Social Inquiry

- Improved classification accuracy to 0.8 (classical statistic method: 0.6) with audio feature extraction and cognitive psychology of music techniques
- Designed an automatic scrawling system for retrieving latest music songs and lyrics with multithreading

Skills

- **Programming Language:** Python, C++, C, JavaScript, React.js, Node.js, R
- **Other Technical Skills:** Azure, AWS, Spark, Git, Linux, MySQL, MongoDB, HTML/CSS
- **Languages:** Mandarin (native), English (TOEFL 104/120)