

# Yu-Chia 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

- CS GPA: 3.94/4.3 (3.82/4.0)
- CS-Related courses: Computer Programming Language, Data Structure, Operating System, Discrete Math, Machine Learning

## PRACTICAL EXPERIENCE

### Microsoft Corporation

Taipei, Taiwan

Software Engineer Intern

July 2020 – July 2021

- Built a deep learning-based fan anomaly detection model with 99% accuracy (production stage) for a manufacturing company (80,000+ employees)
- Designed dataflows of 300TB+ monthly data for business analytics with Azure Synapse, Azure Databricks, and Azure Machine Learning
- Coordinated and Lectured 10+ Azure Machine Learning workshops for 150+ engineers

### eLand Information Corporation

Taipei, Taiwan

Data Science Engineer Intern

Mar. 2020 – June 2020

- Developed a machine learning model for categorizing websites
- Maintained and validated the accuracy of newly released AI models used for semantic analysis

## RESEARCH EXPERIENCE & PUBLICATIONS

### National Ilan University - Multimedia & Intelligent Technical Laboratory

Ilan, Taiwan

Advisor: 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.

## SELECTED PROJECTS

[Data Structure Visualizer](#) | Node.js, React.js, MongoDB, Azure Cloud Services (Azure Static Web App and Azure App Service)

Final Project: Web Programming

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

**Ecommerce Website** | Node.js, Nginx, AWS Cloud Services (Amazon EC2, Amazon S3, and Amazon RDS), GitHub Actions

Side Project

- Implemented an e-commerce website featuring the shopping cart, administrative management systems, and email marketing tools
- Devised the dataflow and cloud solutions on the AWS Cloud Platform to enhance flexibility and fault tolerance ability

**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 the latest music songs and lyrics with multithreading

## SKILLS

- **Programming Language:** Python (Django), JavaScript (Node.js, React.js, Next.js), C/C++, HTML/CSS, Tailwind CSS, Java, TypeScript, R
- **Other Technical Skills:** Azure, AWS, Google Cloud Platform, Git, Linux, MySQL, MongoDB, Spark, Hadoop, Fish Shell