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 precision marketing with a 10+% increase in accuracy of website classification tasks
- 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 10 sorting algorithms
- Accelerated website released rate by 10 times 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 machine learning models
- 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