

Hsing-Yu(Hugo) Shih

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Experience

Microsoft

New Taipei City, Taiwan

SOFTWARE PROGRAM MANAGER

Jan. 2023 - Present

- Developed hardware telemetry infrastructure system for Azure, supporting billions of machines and powering cutting-edge AI systems.
- Achieved a 35% reduction in root cause analysis time, a 30% decrease in out-of-repair time, and a 20% improvement in the annual interrupt rate through automated alerting, real-time diagnostics, and continuous firmware monitoring.
- Managed CI/CD maintenance, NPI system validation, and data pipeline development using Python(Azure Synapse) and C#, while overseeing program management tasks including requirements clarification, design specification writing, scheduling, and project execution.

SOFTWARE ENGINEER INTERN

Jul. 2021 - Jun. 2022

- Developed a firmware development management tool using Python, KQL, and PowerBI that reduced firmware version status tracking time by 80% and enabled real-time automated tracking.
- Created tools for ODM service quality tracking and NPI project milestone visualization, improving cross-team integration and reducing report preparation efforts by 60%.

Quoger (Startup Project)

Taipei, Taiwan

CO-FOUNDER / CTO

Aug. 2020 - Jun. 2021

- Developed a coupon exchange platform for vendors and students near the NTU campus, aimed at optimizing the value of coupons issued by caterers and minimizing information asymmetry-related costs.
- Led full-stack architecture design and development, created cross-platform applications utilizing React-Native, executed CI/CD processes with GitLab, and managed iOS launch procedures.

National Taiwan University

Taipei, Taiwan

TEACHING ASSISTANT

Sep. 2020 - Jun. 2022

- Guided 200+ EE major freshmen in Computer Programming course in mastering Python and C/C++, teaching fundamental computer concepts through well-designed course materials, and maintaining online Python environments with JupyterHub and container-based online judgment services.
- Supported 30+ student teams in Technology Innovation and Startup Course, helping them create viable business concepts and polished business plans.

GRADUATE RESEARCH ASSISTANT - NTUEE DATA SCIENCE AND ARTIFICIAL INTELLIGENCE LAB

Feb. 2020 - Sep. 2022

- Collaborated with Cathay Bank on anomaly behavior detection research for online banking.
- Developed an IoT verification system based on blockchain and Physically Unclonable Function (PUF).

UNDERGRADUATE RESEARCH ASSISTANT

Jun. 2018 - Feb. 2020

- Cooperate with TransGlobe Life Insurance to design an automated optimized scheduling system for customer service personnel based on operating research.(Instructed by Prof. Ling-Chieh Kung in NTUIM)
- Research using image processing techniques on remote sensing images to quantify urbanization. (Instructed by Prof. Chyi-Rong Chiou in NTUF)

Education

National Taiwan University

Taipei, Taiwan

MASTER OF SCIENCE - ELECTRONICS & COMMUNICATION ENGINEERING

Feb. 2020 - Sep. 2022

- Advisor: Prof. Tsung-Nan Lin (Major in Data Science and Smart Network)
- GPA: 4.1/4.3

BACHELOR OF BUSINESS ADMINISTRATION - DEPARTMENT OF INFORMATION MANAGEMENT

Sep. 2015 - Feb. 2020

BACHELOR OF SCIENCE IN AGRICULTURE - DEPARTMENT OF FORESTRY AND RESOURCE CONSERVATION (DOUBLE MAJOR)

- Major in Biomaterial & Resource Conservation and Management (Forestry Department)

Publication

2022 **Master Thesis**, AI-URG: Account Identity Based Uncertain Graph Algorithm for Fraud Detection

Taipei, Taiwan

2021 **IEEE GLOBECOM**, DRAGON: Detection of Related Account Groups for Online services with uncertain graphs

Madrid, Spain