

# Yu Lun Hsu

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## EXPERIENCE

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### NYCU ITSC System Development Team

July. 2021 – Present

*Full-stack Engineer, Architecture Designer*

Golang, MySQL, Docker, Vue.js

- Light-weight and microservice-like system architecture design for Institute of Public Health
- Conduct stress test for optimizing API server; **increased rate of request by 200%**
- Introduce **CI/CD pipeline and containers** with gitOps to boost productivity by 50%
- Integrate **AWS S3** into resource server and **MySQL** backup routine
- Build backend api and database service in Golang, design UI by Figma, and implement frontend via Vue.js

### Reinforcement Learning and Bandits Lab

July. 2020 – Jan. 2022

*Undergraduate Researcher*

Python, RL, Algorithm

- **Undergraduate research fellowship, Ministry of Science and Technology (Most), Taiwan**
- Analyze on the overestimation over distributional deep Q network (C51, QR-DQN, IQN)

### College of Management, NYCU

Mar. 2020 – Jan. 2022

*Researcher, Teach Assistant*

Python, Matlab

- Time series prediction via variant of Lotka-Volterra model of energy consumption
- Automate whole research pipeline to enhance productivity
- Build private web service for sharing executable programs over lab members

## AWARDS & CERTIFICATIONS

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### Academic Achievement Award

*Ranked TOP 1 in Department of Computer Science*

### Undergraduate research fellowship, Ministry of Science and Technology

*Senior project: On the Overestimation Bias of Distributional Reinforcement Learning*

### NI Certified LabVIEW Associate Developer

*LabVIEW developer certification*

## PROJECTS

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### Detection of Ponzi Scheme in Smart Contract 🔗

- Perform better preprocessing to improve f1-score up to 0.12 than [this IEEE paper](#)
- Implement a frontend UI to copy, paste and detect OPcode of smart contract

### Ablation of Implicit Quantile Network 📄

- Find and evaluate the important factor in IQN.
- Elaborate the reason why IQN is better than QR-DQN

### Bitcoin Trader 📄

- Utilize proximal policy optimization algorithms (PPO) to automatically trade on Binance and gain **400% profit rate**

## EDUCATION

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### **Institute of Computer Science and Engineering**

*National Yang Ming Chiao Tung University*

Sep. 2022 –  
Master Degree

### **Department of Computer Science**

*National Yang Ming Chiao Tung University*

Sep. 2018 – June. 2022  
Bachelor Degree

## SKILLS

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**Languages** : Golang, Python, JavaScript (Vue.js, React.js), HTML/CSS, SQL (MySQL, SQLite), Matlab

**Ability** : Git, DevOps, ML, RL, DL