# Shao-Ching (Jason) Huang

SENIOR UNDERGRADUATE, COMPUTER SCIENCE, NTU

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#### **EDUCATION**

National Taiwan University(NTU), Taipei, Taiwan

Computer Science and Information Engineering

Sep' 19 - Jun' 23 (Expected)

GPA: 4.13/4.3 (Overall)

Coursework: Data Structure and Algorithm(A<sup>+</sup>), Algorithm Design and Analysis(A), System Programming(A<sup>+</sup>), Operating System(A<sup>+</sup>), Machine Learning(A<sup>+</sup>), Web Programming(A<sup>+</sup>)

## Internship Experience

## Eero, Amazon

Software Dev Engineer Intern

Taipei, Taiwan Sep '22 - Present

- Develop and maintain internal automation framework and testing environment for eero products.
- Identify and fix issues in eeroOS firmware.

### AICS, ASUS

Software Engineer Intern

Taipei, Taiwan Jun '22 - Aug '22

- Developed internal Kubernetes deployment pipeline with Azure DevOps.
- Re-implement an existing open source tool, selenium-ide, for internal applications compatibility.

#### HTC

Software Engineer Intern

Taipei, Taiwan
Jun '21 - Aug '21

## RESEARCH PROJECTS

#### Intersection Management with Reinforcement Learning

Supervisor: Prof. Chung-Wei Lin

Feb '22 - Present

- Paper accepted by **DATE 2023**, 17-19 April 2023, Antwerp, Belgium.
- A graph-based model, Timing Conflict Graph, is used to simulate real-world intersections.
- Applied PPO learning framework on scheduling problems of intersection management to achieve deadlock-free scheduling policy with performance improvements.

#### Lightweight Privacy-Preserved Speaker Recognition with Federated Learning

Supervisor: Prof. Hung-Yi Lee

Jul '22 - Present

- Aimed to propose a privacy preserving speaker recognition framework which can be deployed on real-world devices such as mobile phone.
- Used federated learning to prevent the necessity of central server to access privacy-sensitive data.
- Identified trade-offs between privacy protection and computation complexity, and proposed mitigation methods.

# Course Projects

#### Approaches and Analysis on Chinese Zhu-Yin Decoding

Course: Digital Signal Processing

- Implement and compare the performance of the traditional HMM model and the modern BERT model on the Chinese Zhu-Yin decoding task.
- Plan to deploy public Zhu-Yin-Wen(注音文) translation service in the future.

# TECHNICAL SKILLS

Programming Languages: C/C++, Python, TypeScript/JavaScript, HTML/CSS

Web Development: NodeJS, ReactJS, Django

AI/ML: PyTorch, Tensorflow

DevOps: Azure, Docker, Kubernetes Others: Git, MongoDB, PostgreSQL