Fucheng Hsieh

📞 (714) 280-5665 | ✉ fhsieh@uci.edu | 📍 Irvine, CA 92612

🔗 freddiehsieh | 👤 https://portfolio.fredhs.dev/

EXPERIENCE

NEMS Lab, National Chiao Tung University   Aug. 2020 – Aug. 2021

Research Assistant   Hsinchu, Taiwan

- Revamped network dispatcher and packet analyzer of MEC in 4G Networks, **reduced execution time by 25%**
- Conducted experiment in discovering vulnerabilities in **Cellular-IoT** devices; paper was accepted by **MobiCom'21 (acceptance rate 59/297 = 19.9%)**
- Organized experimental results and drafted research work of enabling Prioritized Traffic Shaping in MEC platform; paper was accepted by **IEEE CCNC'22**
- Designed and implemented an All-in-One business starting solution with IP Camera, POS, and Mesh Wi-Fi; **virtualized Mesh controller with Docker**

Trend Micro   Summer 2017/2018

Software Engineer Intern   Taipei, Taiwan

- Developed automated QA tool to ensure product installation procedure follows companys standards
- Programmed IT automated tool to synchronize LDAP settings from employee database whenever an organizational change is detected; was deployed in IT department and executed periodically
- Built Query Tool for product developers to verify the standard operating procedures whenever competitor's product has been installed

EDUCATION

University of California, Irvine   Sept. 2021 – Present

M.S. in Computer Science   Irvine, CA

National Chiao Tung University   Sept. 2016 – June 2020

B.S. in Computer Science   Hsinchu, Taiwan

- **CGPA:** 3.9/4.0, **Rank:** 2/58
- **Honors**: Academic Achievement Award, 4 Semesters
- **Teaching Assistant**: System Administration (graduate-level course)

PROJECTS

NFT Marketplace   [Solidity, React.js, Node.js, Next.js, Bootstrap, RWD]

- Utilized **Ethereum protocols** to implement smart contracts, allowing users to trade and manage NFT assets
- Constructed a **Full-stack web application** using React, Next, and Bootstrap with Responsive Web Design

Fabric Defect Detection   [Keras, TensorFlow, PyQt, CNN]

- Developed Fabric Defect Detection Tool with **Deep Learning** to help a local firm increase the production yield
- Implemented and tuned cutting-edge DL models including EfficientNet-B7 with **Keras**
- **Built a UI with PyQt** for workers to upload images, sample data, and detect defects automatically

μC Compiler   [C, Bash, Compiler Optimization]

- Utilized C, Yacc, and Lex to create a C-like language compiler, supporting most of the C-language elements
- **Designed UI with Bash** to provide a seamless user experience to other commonly used compilers

Node.js Bulletin-Board System   [Node.js, MongoDB, AWS, Apache Kafka]

- Designed a text-based BBS using **Node.js**, allowing users to **Register, Login, Chat**, and **Create, Delete, Edit** posts
- Utilized **MongoDB** to save user information, **AWS S3** to save posts, and **Apache Kafka** for subscription service

SKILLS

Languages : C/C++, Python, JavaScript (React, Express, Node), Bash, HTML/CSS

Tools : UNIX, Git, Keras, Docker, Wireshark, OpenWrt, MongoDB, AWS S3, Apache Kafka, LaTeX