

Fucheng Hsieh

☎ (714) 280-5665 | ✉ fhsieh@uci.edu | 💻 freddiehsieh | 👤 portfolio.fredhs.dev | 📍 Irvine, CA

EXPERIENCE

- IBM** San Jose, CA
Software Engineer Intern | React, TypeScript, Unit Test, DevOps Jun. 2022 – Sept. 2022
 - **React Development:** Built two React components for Watson Discovery Annotation tool that let users label text for performing NLP analysis. Contributed over **700** lines of code
 - **Unit Test:** Increased over **50%** unit test coverage for multiple React components by incorporating Enzyme and Cypress scripts with a combination of GitHub CI/CD pipeline
 - **DevOps:** Teamed with four engineers, prioritized breakdown tasks, and conducted **Agile development** in the daily standup meeting to solve customers' issues and implement new features
- NEMS Lab, National Chiao Tung University** Hsinchu, Taiwan
Research Assistant | C++, Edge Computing, 4G/5G, IoT Aug. 2020 – Aug. 2021
 - **MEC:** Refactored network dispatcher and packet analyzer of MEC in 4G Networks, reduced execution time by **25%**
 - **IoT:** Performed experiments to discover vulnerabilities in Mobile-IoT devices. Paper accepted by **ACM MobiCom'21**
 - **Research Work:** Organized and drafted research paper on enabling Prioritized Traffic Shaping in MEC. Paper accepted by **IEEE CCNC'22**
 - **Dual-uCPE Mesh System:** Designed and implemented an All-in-One business system with IP Camera, POS, and Mesh Wi-Fi. Virtualized Mesh controller with **Docker** and deployed in a **dual-uCPE** system
- Trend Micro** Taipei, Taiwan
Software Engineer Intern | Python, LDAP, QA, Crawler, Shell Summer 2017 & 2018
 - **QA Automation Tool:** Designed and developed a **QA automation tool** to ensure product installation procedure follows the design guidelines and export analysis automatically
 - **LDAP Sync System:** Programmed IT automated tool to synchronize **LDAP user permissions** from employee database whenever an organizational change is detected. Deployed in IT system and executed periodically
 - **Python Query Tool:** Built Query Tool for developers to check the standard procedures whenever they detect Third-party security software. Reduced search time by **70%**

EDUCATION

- University of California, Irvine** Irvine, CA
M.S. in Computer Science Sept. 2021 – Dec. 2022 (Expected)
- National Chiao Tung University** Hsinchu, Taiwan
B.S. in Computer Science | **GPA:** 3.9/4.0, **Rank:** 2/58 Sept. 2016 – Jun. 2020
 - **Honor:** Academic Achievement Award, 4 Semesters
 - **Activity:** TA of System Administration (graduate-level course)

PROJECTS

- NFT Marketplace** | Solidity, React, Node.js, Next.js, Bootstrap, RWD
 - Utilized **Ethereum protocols** to implement smart contracts, allowing users to trade and manage NFT assets
 - Created a **Full-stack web app** using React, Next, and Bootstrap with Responsive Web Design
- Fabric Defect Detection** | Keras, PyQt, CNN
 - Developed Fabric Defect Detection system with **DL Models** to help a local firm increase the production yield
 - Increased accuracy by up to **20%** with the implementation of EfficientNet-B7 in Python Keras
 - Built a UI with **PyQt** for workers to upload images, sample data, and automatically detect defects in the fabric
- Node.js Bulletin-Board System** | Node.js, MongoDB, AWS, Apache Kafka
 - Designed a BBS system using **Node.js**, allowing users to Register, Login, Chat, Create, Delete, and Edit posts
 - Utilized **MongoDB**, **AWS S3** for saving user information and user's posts, **Kafka** for subscription service on different bulletin boards and internal message service

SKILLS

Languages : C/C++, Python (Keras), JavaScript (React, Express, Node), TypeScript, Sass, Bash
Tools : Linux, Git, Storybook, Enzyme, Cypress, Docker, Wireshark, OpenWrt, MongoDB, AWS, \LaTeX