

HSIAO-TING HUANG

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EDUCATION

University of Washington

Seattle, WA

M.S in Electrical and Computer Engineering, GPA 3.97/4.0

Sep 2021 – Jun 2023

Courses: Privacy Preserving Machine Learning, Computer Vision, Self-driving Car, Recommendation System

National Cheng Kung University

Tainan, Taiwan

M.S. in Computer and Communication Engineering, GPA 4.18/4.3

Feb 2018 – Aug 2021

- **Award:** Received a full scholarship and internship as a visiting research student to LARC (SMU-CMU Joint Lab), Singapore
- **Award:** Won 45th place out of 662 participants in KDD Cup 2018 (Top 7% worldwide) [[URL](#)]
- **Teaching Assistant:** The course “Introduction to Computer Science” and the course “Practical Applications of Artificial Intelligence”

B.S. in Computer Science and Information Engineering

Sep 2013 – Jun 2017

RESEARCH EXPERIENCE

Capstone Research Project at University of Washington | *Team Lead* (Computer vision, video captioning)

Seattle, WA

Project: AI Video Captioning

Jan 2022 – Jun 2022

1. Developed a dense video captioning solution for 1-hour recordings, bridging visual and language data for indoor & outdoor scenarios.
 2. Enhanced the PDVC model for event detection and captioning, advancing state-of-the-art research in dense video captioning.
 3. Delivered software enabling users to monitor daily events and identify critical situations in long-duration video footage.
 4. Led the first software team to secure a Top 3 placement in the ECE Capstone competition, breaking hardware team dominance.
- **Award:** 3rd prize in UW ECE capstone competition

Living Analytics Research Center (SMU-CMU Joint Lab) | *Research Engineer Intern* (Machine learning, Urban planning)

Singapore

- **Project 1:** Individual Trip Prediction on Multi-mode Transit System **Project 2:** Travel Time & Route Preferences for MRT Aug 2018 – Nov 2019
 1. The first model considers multi-mode transit, allowing users to predict multi systems' passenger trips at the same time
 2. Outperformed state-of-the-art methods with 15% higher accuracy in predicting location and duration of a passenger's next trip
 3. Dealt with sparse individual passenger trajectories dataset by predicting transit mode and identifying trip regularity
 4. Targeted on recovering exact routes taken by commuters inside MRT not captured by the Automated Fare Collection system
- **Publication:** “TRIPDECODER: Study Travel Time Attributes and Route Preferences of Metro Systems from Smart Card Data.” ACM/IMS Transactions on Data Science, July 21, 2021. [[URL](#)]
- **Attendance:** IEEE CIKM 2018

Knowledge and Information Discovery Lab | *Research Assistant* (Deep learning, Time series, Data warehouse design)

Tainan, Taiwan

- **Project 1:** Air pollution real-time prediction [[URL](#)] **Project 2:** QQAQ (QQ Air Quality) [[URL](#)] Jul 2017 – Aug 2018
 1. Designed a spatial-temporal model (LSTM+CNN+SVM) and beat the latest time series model, lowering MAE by 27%
 2. Built machine learning pipelines to predict the AQI of London and Beijing within next 48 hours; ranked top 7% on KDD CUP 2018
 3. Developed mobile application and webpages for users to check the real-time air quality easily (Android, HTML5, JavaScript, MySQL Flask, D3.js)
 4. Built up a large-scale database on MongoDB and optimized the data infrastructure to ensure the high quality of the big data

WORK EXPERIENCE

MediaTek Inc. | *Software Engineer* (C/C++, Python, embedded system)

San Diego, CA

- Utilized LLM with 3GPP Spec and modem issue guidelines to handle CR issues first-hand analysis and covered 80% of the CR issue. Decreasing the analysis time by 90% to find the root cause.
- As a person in charge and modem, RRC owner for 3 4G/5G features, C++ for D/C/U

Aug 2023 - Current

Wyze Labs | *Software Engineer Intern* (Java, OAuth, Spring boot, Cyber security)

Seattle, WA

- Improved the OAuth2 cloud service based on Spring boot framework
- Increased user subscriptions by consolidating 3rd party sign-in and standard sign-in methods
- Integrated a security feature for websites to limit users' multiple clicks/access in their google accounts with OAuth2

Jun 2022– Dec 2022

MediaTek Inc. | *Software Engineer Intern* (C/C++, Python, HTML, JavaScript, CSS, Django, MySQL)

Hsinchu, Taiwan

- Developed an auto log parser and interface which improved analysis efficiency by 20%
- Implemented scalable backend system and helped users customize features by auto parsing over 100,000+ log files
- Assisted in resolving technical problems with 5G solutions, using MACE to extract the required 20+ features from 20+ EPS Fullback logs

Jul 2021–Aug 2021

Ainimal | *Cofounder/Machine Learning Engineer* (Python, Natural Language Processing)

Tainan, Taiwan

- An innovative startup project of an AI dating app using NLP algorithms to find potential matches [[URL](#)]
- Independently developed sentiment analysis model through users' communication style to recommend suitable dates to users
- Used Jieba for Chinese hyphenation; TF-IDF and vector notation for word frequency statistics; LinearSVC for extracting features
- **Award:** AUCC Entrepreneurship training camp selected team (2019)

Mar 2018-Aug 2018