

Chen Wei (Allen), Huang

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Education

M.S., Electrical and Computer Engineering, University of Washington – Seattle 2023 - present

- Relevant courses: Data structures Algorithm, The self-driving car: intro to AI for mobile robots

B.S., Electrical Engineering, Fu Jen Catholic University 2015 - 2019

- Relevant courses: Computer Programming, Assembly language, Verilog(HDL)
- Academic roles: Teaching assistance for Electronics iii under Prof. Steve Tu(2019)

Technical Skills

Languages: Python, Java, C, HTML, CSS, React, Node.js

Framework: Flask, ROS

Machine learning: PyTorch, Numpy, Pandas

Database: MongoDB, SQL

Work Experience

Computing Engineer, MSI | Taipei, Taiwan

Apr 2021 - Mar 2023

- Designed Intel and AMD motherboards, utilizing software and external component tuning, boosting the overclocked CPU frequency by 20% while guaranteeing excellent power management and highspeed signal.
- Solved the SATA eye diagram problem, utilizing the shell system and external component to reduce 10% noise and keep the signal integrity perfectly.
- Key contributor to the AMD Pro B650-P Wi-Fi motherboard, which ranked as the second-best selling project in the team.

Research and development, Panasonic AVC Networks | Taipei, Taiwan

Sep 2020 - Mar 2021

- Ensured highspeed signal integrity and proper power sequencing by utilizing GUI and scope to fine-tune the result through EVT.
- Ensured memory functionality, using DOS system to verify and validate signal to guarantee proper performance and stable system.

Field Application Engineer, Chenmko | Taipei, Taiwan

Jan 2020 - Aug 2020

- Assisted clients in optimizing logic circuit designs containing diodes, transistors, and MOS to minimize nearly 5% of product cost in components.
- Developed highspeed ESD products and automotive-grade quality products for electric vehicles.

Research and development Intern, CET-MOS | Taipei, Taiwan

Feb 2019 - Jun 2019

- Gained hands-on experience in the processing of Power MOS for high-voltage (650v) and 5G products.
- Gained detailed knowledge of products vertical integration, from developing specifications, running multiple electronic and reliability tests to mass producing.

Project

Self-driving Car | University of Washington – Seattle

Sep 2023 - present

- Experienced in control algorithm in PID and MPC by using Python for mobile robot navigation in ROS system.
- Deployed in path planning algorithms like Dijkstra, A*, RRT, and in localization through particle Filter with Velocity-based Motion Model and Beam-based Sensor Model localization for efficient navigation.
- Experienced in deep learning and AI/ML, including CNNs, autoencoders, transformers and Q learning.

Movie Watchlist Web

Jul 2023

- Developed a movie watchlist web application by using Python, HTML, CSS, and MongoDB.
- Implemented user authentication and authorization and various features, by using REST APIs on Flask framework to make users customize their own page.