CHEAH HAO YI / 谢皓怿

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EDUCATION

National University of Singapore (NUS) **July 2021 - July 2025**
Bachelor of Engineering, Computer Engineering

- NUS ASEAN Merit Scholarship, Second Class Upper Honours
- Second Major in Business, Specialization in IoT, Specialization in Robotics, Minor in Economics

Technical University of Denmark (DTU) **January 2024 - May 2024**
Erasmus Programme

- VLSI design, Reinforcement Learning and Control, Model-based Machine Learning

WORK EXPERIENCE

Software Engineer, Espressif Systems (Czech Republic) **May 2024 – August 2024**

- Integrated a compression algorithm feature to reduce memory size by up to 5%
- Authored 2 tutorials on Espressif Developer Portal
- Explored using LLMs to generate boilerplate code for ESP-IDF projects
- Engaged clients and stakeholders at industry events

Software Engineer, Espressif Systems (Singapore) **May 2023 – December 2023**

- Contributed to the Espressif IoT Development Framework (ESP-IDF)
- Developed new BLE and OTA-Update example for the ESP-IDF repository
- Engaged partners to identify and pursue new business opportunities for Espressif products and technology solutions
- Presented 5 workshops for 250 students combined at NUS, NTU, and SUTD

Teaching Assistant, National University of Singapore **August 2022 – Present**

- Taught CS2113/T - Software Engineering and Object Oriented Programming in Java to a class of 12 students and supervised a team of 4 on course team project
- Taught IT5003 - Data Structures and Algorithms in Python to a class of 25 Master Graduate students and Adult Learners, under the guidance of Professor Steven Halim

PROJECTS

- Sharpe Return Based Style Analysis: Conduct portfolio optimization with real-time Yahoo Finance Data using Pandas, Matplotlib and Scikit-Learn
- Singapore Carpark Availability Prediction: Predict carpark availability with Singapore Open Data Portal using Numpy, Geopandas and Pytorch

ADDITIONAL INFORMATION

- Proficient in English, Chinese and Malay (Written and Spoken)
- Proficient in C/C++, Python, Java; Experience in Verilog and VHDL
- Familiarity with wireless protocols such as 802.11a/g/n/x, BLE, MQTT, Zigbee
- Experience with Python libraries such as Matplotlib, Numpy, Pandas and Pytorch
- Hands-on experience with Machine Learning and Data Analytics algorithms