KAI-HSIN HUNG

(209) 453-5750 | k_hung2@u.pacific.edu | Linkedin | Github | Website |

EDUCATION

University of the Pacific, Stockton, California

Master of Science in Data Science — Aug. 2024 - May. 2026

Overall GPA: 3.92

Relevant Courseworks: Relational Databases, Machine Learning, Natural Language Processing

Ming Chi University of Technology, New Taipei City, Taiwan

Bachelor of Science in Material Science and Engineering — Sept. 2019 - Jun. 2023

Relevant Courseworks: Thermal Dynamics of Materials, Engineering of Mathematics, Semiconductor Processing

SKILLS

Computer Programming: Python, SQL, HTML, JavaScript

Language: Mandarin (Native), English (Fluent)

EXPERIENCE

Birthday Messaging, UK (Remote) — Apr. 2025 - May. 2025

Software Developer (Internship)

- Developed and integrated backend API endpoints using Python and JavaScript, enabling new features on both backend and frontend to improve user engagement.
- Managed and connected SQL databases with Python to streamline data flow and ensure reliable data storage for user-submitted content.

Formosa Plastics Group, Yunlin County, Taiwan — Nov. 2021 - Sept. 2022

Manufacture Engineering (Internship)

- Organized Low-Density Polyethylene factory pipeline data by material, diameter, and length to speed up repairs.
- Used ultrasound for pipeline analysis to confirm completion and reduce issues, cutting leaks by 15%.

SELECTED PROJECTS

Time Series Forecasting of TSMC Stock Prices Using RNNs and ConvNets — Jun. 2025

- Built a stock forecasting app with Flask and React to predict TSMC's next-day closing price using LSTM, GRU, Conv1D, and FFN models on Yahoo Finance data.
- Tuned and compared model performance, identifying GRU and FFN as top performers with test MAE around $4.2 (2.2%), demonstrating strong generalization.
- Deployed an interactive web app by integrating REST APIs with a React frontend, enabling users to trigger predictions and visualize model outputs in real time.

Perceptron and Shallow Neural Network Implementation. — Mar. 2025

- Built a wine quality prediction model using Lasso regression to select impactful features and achieved an out-of-sample MAE of 0.7654.
- Compared performance with a debiased linear regression model and evaluated both models using cross-validation and median absolute error.
- Developed a custom 3-layer neural network using stochastic gradient descent and back propagation, reaching a minimum in-sample error with hand-tuned weights and plotted predicted vs. actual values.