

Cherng Yow Cheng
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Education

National Yang Ming Chiao Tung University , Hsinchu, Taiwan Master of Science in Industrial Engineering and Management	Sep 2021 – Jun 2023
National Taiwan University , Taipei, Taiwan Bachelor of Science in Mechanical Engineering	Sep 2017 – Jun 2021

Experience & Projects

Mirle Automation Corporation , Hsinchu, Taiwan Software Engineer – AGV & CTU Control Systems <ul style="list-style-type: none">Developed C++ logic modules for AGV control, including navigation, path planning, and task scheduling, enhancing system stabilityDesigned and tested CTU (Container Transfer Unit) systems from architecture to module integration, collaborating with electrical and testing teamsIntegrated gRPC interfaces to synchronize real-time data between AGV software and management systemsMigrated traffic management from rule-based logic to ECBS with location-time A*, enabling scalable and conflict-free routing for multi-vehicle coordination in complex scenarios.Developed a Python-based MCP server integrating LLM for natural language interface (map query, task assignment, interruption), enhancing system accessibility and automation flexibilityDeveloped Python-based tools for map visualization, layout validation, and Wi-Fi heatmap generation, improving deployment efficiency	Apr 2024 – Present
GlobalWafers , Hsinchu, Taiwan AI Research Project – Equipment Anomaly Detection <ul style="list-style-type: none">Conducted data pre-processing and feature extraction on 200+ sensor signals from wafer-cutting machinesTrained and deployed an Autoencoder-based deep learning model to predict anomalies and machine health statusSuccessfully integrated the model into production, reducing maintenance cost and unplanned downtime	Oct 2021 – Jun 2023
National Taiwan University , Taipei, Taiwan Capstone Project Leader – Wind-Powered Vehicle Design <ul style="list-style-type: none">Led a project team to design and build a wind-powered vehicle, integrating mechanical, electronic, and control systemsSelf-taught programming and developed the vehicle's control system to enable efficient operationOrganized regular team meetings, managed task assignments, and ensured smooth integration across subsystemsDelivered a fully functional wind-powered prototype and achieved all project milestones	Feb 2019 – Jun 2020

Skills & Interests

Programming Languages: Python, C++, C#, SQL
Frameworks/Tools: gRPC, WebSocket, PyQt, MQTT, Autoencoder, A* Algorithm, ECBS
Interests: Smart Manufacturing, AI for Industry, Optimization