

CHARLENE CHAO-RONG CHEN

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<https://charlene-chenn.github.io/github-portfolio/>

SKILLS

Languages: English (native), Chinese (native)

Programming Languages: Java, Python, C, C++, Matlab, VBA, Arduino, HTML, CSS, Javascript, TypeScript, Bash

Tools/Frameworks: PyTorch, Tensorflow, React.js, Git, PyBullet, Fusion 360, Cura, Figma, Tableau, Adobe Creative Suite

WORK EXPERIENCE

AcoustoFab, UCL Interaction Centre Multisensory-Devices Group

London, United Kingdom

Software Engineering Research Intern

June 2024 – September 2024

- Conduct acoustic manipulation for specialized tasks on phased arrays of transducers using C++ and machine vision

Siemens

Taipei, Taiwan

Assistant Data Analysis Engineer

June 2022 - July 2022

- Performed systems testing on integrating Siemens' building management system with third-party systems
- Analyzed 4 months of Siemens' energy datasets and public datasets to identify efficiency drivers and forecast infrastructure usage using Excel VBA, NumPy, and Matplotlib

RESEARCH/PROJECT EXPERIENCE

Robotic Grasp Classifier Simulation Framework

Second Year Term Project

- Developed grasp classification model using machine learning with 9000+ grasp data generated with PyBullet simulation

UCL AI Society Nexus Labs

London, United Kingdom

Undergraduate Neuroscience Pillar Researcher

October 2023 - March 2024

- Built EEG-based preprocessing pipeline and classification models to identify potential biomarkers for early Alzheimer's detection

Tendon-Driven Continuum Robot

London, United Kingdom

First Year Term Project

October 2023 - March 2024

- Modeled robot movement in MATLAB and manufactured modularized components with Fusion 360 and Cura
- Programmed STM-32 microcontroller in C++ as extrinsic actuation unit for 6 degrees-of-freedom robot prototypes

LEADERSHIP EXPERIENCE

UCL Artificial Intelligence Society

London, United Kingdom

Head of Operations

June 2024 - Present

- Cross-functional management of leadership team and society initiatives: AI Foundry, Nexus Labs, Machine Learning Tutorials
- Facilitated interdisciplinary student-led research for over 150 students as research branch administrator

FIRST Robotics Competition

Taipei, Taiwan

Head of Statistics/Strategy and Outreach

August 2019 - June 2023

- Compiled comprehensive data-driven strategy through team liaison and scouting
- Led initiatives to promote STEM education: organize team visits, build robotics department's website, curate open-source swerve documentation, and host interactive events encouraging female and younger students' participation
- Qualified for World Championship in 2023 Hawaii Regional, 2023 Canadian-Pacific Regional, 2021 New Taipei City Regional

EDUCATION

University College London

London, United Kingdom

Master of Engineering Robotics and Artificial Intelligence

September 2023 - Present

Relevant Coursework: Linear Algebra, Multivariable Calculus, Discrete Math, Probability and Statistics, Optimization,

Differential Equations, Data Structures and Algorithms, Mechatronics, Control Systems, Machine Learning, Modeling and Simulation

Taipei American School

Taipei, Taiwan

Advanced Placement Scholar with Distinction, High School Diploma

August 2014 – June 2023

Received 4.49 GPA and 4-year honour roll

Relevant Coursework: Vector Calculus, Artificial Intelligence, Machine Learning, Computer Vision, Web Application Development