Zhaolin (Clark) Wei

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Core Skills

Engineering: SolidWorks, AutoCAD, NX Unigraphics, Revit, Power Mill
Programming: Python, MATLAB, Java
Electronic Design: Altium Designer, LTspice
Data Analysis Tool: Origin, Pandas
Soft skills: Effective Communication, Team Collaboration, Problem-Solving

Education

University of British Columbia, Master of Engineering in **Mechatronics Design** Aug 2024 – Present

- Area of Concentration: Manufacture, Control, Electric drives

University of Macau, Bachelor of Science in **Electromechanical Engineering** Aug 2020 – Jul 2024

- Key courses: Control Theory, Sensors, Mechatronics, BIM, FEA, Materials strength & rheology

Technische Universität Berlin, Summer School in **Java Programming** Jul 2022 – Aug 2022

Work Experience

Mechanical Engineer Assistant, Anyang ForWord Machinery Co., Ltd, Anyang May 2024 – Aug 2024

- Designed a Python program to calculate the electromagnetic computation of small permanent magnet direct current synchronous motors improving calculation efficiency and accuracy.
- Used UG and SolidWorks to set up a 3D model database of a machining center's motorized and electric spindles.

Technician Assistant, Sands China, Venetian Macau Limited, Macau Jun 2023 – Jul 2023

- Collaborated with teams to implement safety protocols and contingency plans for Tropical Storm Talim, enhancing emergency response readiness.
- Worked with the team to proactively identify and troubleshoot electrical issues, equipment noises, and air conditioning leaks in Cotai Arena to prepare for summer concerts.
- Contributed to maintaining and replacing air conditioning ducts, improving uptime by coordinating workflows during high-demand periods.

Research Experience

Research Volunteer, Electric Power and Energy Systems Group, University of British Columbia Sep 2024 - Dec 2024

- Researched modelling of electric drives while designing and implementing simulations for electrical machines, drives, and control systems using MATLAB/Simulink.

Research Assistant, Centre for Artificial Intelligence and Robotics, University of Macau Sep 2023 - May 2024

- Applied Finite Element Method (FEM) to design and optimize self-powered flexible electromechanical sensors for personal pulse evaluation.
- Used the CNN method to analyze pulse data to judge the user's sleep health and achieved an average accuracy of more than 90% in a 5-level classification task.
- Expanded a 3D model database, extracted key features, and developed a fast robotics detection and classification system for 3D industrial workpieces.

Summer Program Assistant, Soft Sensors-Actuators-Robots Laboratory, University of Macau Jun 2023 - Aug 2023

- Engaged in research on fabricating non-contact flexible piezoelectric actuator arrays for electromagnetic energy harvesters with designs created in AutoCAD.

Additional Experience and Awards

Dean's Honor List of the Faculty of Science and Technology in 6 semesters, University of Macau

Certificate of Loyalty for Contribution, University of Macau

First Prize in the 6th National Inter-varsity Art Show, Chengdu, China, 2021