Jarod Fozhun Tang

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Education

The University of Melbourne
Masters of Mechatronics Engineering
Jan 2023 – Apr 2025
Grade: Distinction

Bachelor of Science, Mechatronics Systems
Jan 2020 – Nov 2022
Grade: Distinction

Honours & Awards
Mechatronics Discipline Award – 2024
Mechanical Engineering Research Scholarship – 2024
Undergraduate Pathway Scholarship – 2020

Key Skills

- **Robotics:** Experienced in building ROS2 Humble and Python systems that link physical hardware to simulation. Proficient in OpenCV. Experience with object detection, target tracking, 3D reconstruction, SLAM, camera calibration, and behaviour analysis.
- **Engineering Design:** Adept in utilising CAD software such as Onshape and Solidworks to prototype detailed and precise technical drawings and models.
- **Software Solutions:** Experienced in developing and executing software solutions in Python, C, C++, MATLAB, Fortran, SQL and Java.
- **Simulation Software Development:** Proficient in developing back-end software and automation solutions for Simulink, UE5, Gazebo, PSCAD, PSSE, PSS Sincal and PowerFactory.
- **Power Systems:** Proven experience delivering R0 and R1 full GPS packages per NER. Proficient in PSCAD, PSSE (V34 and V36), PSS Sincal and PowerFactory.

Work Experience

Siemens Ltd
Automation and Power Systems Engineer
Mar 2025 – Current

- Developed Python, C++ and Fortran software solutions to automate creation of simulation environment, post-process and visualise simulation results.
- Conducted power system studies focusing on steady-state, transient, power quality and small signal performance across transmission, distribution networks, micro and hybrid grids.
- Deliver high-impact, detailed reports that transform complex data into actionable insights and solutions.

EBK Academy
Co-Founder and Operations Lead
Sept 2025 – Oct 2026

- Designed and prototyped robotics projects to stimulate problem-solving, learning, and creativity in students.

- Oversaw business operations, driving growth in brand visibility and community reach.

University of Melbourne
Mechanical Engineering Researcher
Nov 2024 – Feb 2025

- Conducted environmental impact analyses to assess sustainability of engineering design choices
- Developed MATLAB software solutions for statistical analyses and visualisation of large datasets
- Processed and organised complex datasets using Excel

Lenexa Medical
AI/ML and Computer Vision Engineer
Nov 2023 – Aug 2024

- Engineered automated image pre-processing pipelines using OpenCV and NumPy to perform de-noising, contrast enhancement, and normalization
- Developed custom data augmentation software solutions to increase dataset variance, significantly reducing model over fitting

Relevant Projects

University of Melbourne
Coursework Project: Driving Simulator for Human Drivers Collaborating with Autonomous Trucks
Mar 2024 – Oct 2024

- Developed a high-fidelity simulator using ROS2 Humble and UE5
- Developed software to interface between Logitech G29 controller inputs and UE5 simulation using ROS2 middleware
- Developed custom C++ libraries to capture and combine sensor data from peripherals

University of Melbourne
Coursework Project: Controller Design for Rotary Inverted Pendulum
Aug 2024 – Oct 2024

- Designed and implemented controllers and observers using both classical and modern control theory
- Built a high-fidelity computer model in Simulink to simulate controller performance

University of Melbourne
Coursework Project: AI-Enhanced Deepfake Detection and Explainability
Feb 2024 – May 2024

- Extracted faces using MTCNN and preprocessed the required data
- Used GradCAM to provide visual reasoning for AI predictions and produce an explainable model

Languages

- English - Native
- Cantonese - Intermediate
- Mandarin - Advanced