# Louis Dinh

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## EDUCATION

**RMIT University** | *Bachelor of Advanced Manufacturing & Mechatronics (Honours)*          **Feb** *2022 – Dec 2025*
*Current Weighted Average Mark (WAM): 73*

## ENGINEERING WORK EXPERIENCE

**Calctree | Software Engineer Intern**          **July** *2025 – Present*

- Designed and developed reusable engineering calculation templates for use across multiple disciplines.
- Authored technical articles and documentation to support platform content and user understanding.
- Researched upcoming AI integrations and API features to enhance platform capabilities and automation.
- Collaborated with the founding team and industry partners to prioritise content and perform QA testing.

**RMIT UAS Research Labs | Founding Software Lead**          **March** *2025 – Present*

- Managed a team of 7 software engineers and placed 3rd place in the Brazilian RoboCup Challenge 2025.
- Developed full-stack software systems for path planning, SLAM, and autonomous control using ROS2 and Nav2.
- Maintained complex Git-based development workflow with multi-branch deployment and CI/CD practices.
- Actively collaborated with multi-disciplinary university teams to ensure integration and performance.

**Chironix | Robotics Engineer Intern**          **Nov** *2024 – Feb 2025*

- Calibrated multiple cameras using ROS2 packages to process and correcting lens distortions.
- Implemented image stitching techniques and OpenCV library to create a panoramic 360 camera from 4 cameras.
- Explored YOLOv8 capabilities of real-time object detection using trained datasets.
- Explored Isaac's GPU processing capabilities and SLAM for real-time visualisation and obstacle detection.

**RMIT ROVER Student Team | Mechanical & Autonomous Systems Engineer**          *Nov 2023 – Nov 2025*

- Designed and built a durable rover chassis used for two full design cycles in the Australian Rover Challenge (7th in 2024, 10th in 2025).
- Integrated LiDAR and stereo camera systems for live navigation and obstacle avoidance.
- Simulated and tested rocker-bogie suspension using URDF, Gazebo, and Foxglove.
- Researched and implemented real-time SLAM using RTAB-Map and ORB-SLAM for long-range navigation.

## SKILLS

- **Programming and Scripting**: C/C++, Python, Bash/Linux.
- **Robotics Middleware & Frameworks**: ROS2 (Robot Operating System), ZMQ.
- **Simulation & Modelling:** Gazebo, RViz, Foxglove studios, MATLAB/Simulink.
- **Version Control & CI/CD:** Git, Docker.

## EXTRA-CURRICULUM

**RMIT Vietnam Fintech Club | Chief Technology Officer**          *Oct 2021 – Feb 2023*

- Supervised the operations up to 15 projects in web- app development and organisational projects for financial applications.
- Deployed and maintained the first student-built website in RMIT Saigon Campus.
- Connected dozens of talented members to the fintech and digital banking industry with more than 60 academics and industry partners.
- Planned and implemented events with other team leaders to build a supportive community for Engineering and IT students in RMIT University.