Liam McCord

mccord.liam@gmail.com   github.com/Liam-McCord

Work Experience

GNC Engineering Intern   *Nov 2025 – Feb 2026*
Kea Aerospace

- Developed a 6-DOF nonlinear aircraft control system validation suite with a wide range of configurable test conditions and Monte Carlo testing.
- Assisted in practical on-site pre-flight setup involving aircraft assembly and testing.

Electrical Engineering Intern   *Dec 2024 – Feb 2025*
Zenno Astronautics

- Proposed, conceptualized, designed, and implemented radiation shielding for a satellite module that is now in orbit. Worked with manufacturers to ensure design goals were met.
- Employed radiation models to predict radiation dosages on a satellite module. Designed and executed a radiation testing plan on satellite systems to validate them for radiation tolerance.

Education

Bachelor of Engineering with Honours (Mechatronics)   *2023 – Present*
University of Canterbury

Certificate in Machine Learning Fundamentals (Level 5, Scholarship)   *Dec 2022 – Feb 2023*
Queenstown Resort College

Academic and Leadership Achievements

- Recipient of the ENGR102 *Engineering Communication Award* (top ~1% of ~600 students) for technical reporting on dynamical systems.
- Lead of the **Avionics & Tracking Sector** within UC Aerospace; executive team member.
- Led two flight computer teams responsible for avionics architecture, planning, and system coordination.

Independent Engineering Work

N-Body Orbital Simulation Tool
- Implemented an orbital simulation framework in Python and C using RK45 integration and Kalman filtering for noisy dynamics.

University RoboCup Competition Robot (Teams of 3)
- Engineered core robot software including drivers and navigation. Conceptualized and iteratively improved a weight collection and storage system to meet performance requirements. Worked with other team members to deliver a performant robot.

Bluestone Flight Computer (University of Canterbury Aerospace Club)
- Engineered a flight computer PCB for a model rocket. Coordinated with other team members to satisfy system-level constraints.

Robotics SLAM Framework
- Constructed a simulated 2D occupancy grid with a custom navigation algorithm for autonomous traversal.
- Achieved rotational pose estimation using real LIDAR data.

References available upon request.