

KIERAN PEREIRA

[Portfolio](#)[LinkedIn](#)kieranpereira@hotmail.com[GitHub](#)

+1 (510)-944-8116

EDUCATION

University of California, Berkeley, USA**August 2024 – May 2025***MEng Mechanical Engineering, Concentration in Robotics***Relevant Coursework:** Dynamics & Control of Autonomous Systems, Robotic Locomotion, Design of Microprocessor Systems.**Capstone Project:** *Developing robotic ocean sensors for swarm coordination.*

- Designed and integrated hardware, software and firmware components for a fleet of 100+ autonomous robotic units.
- Evaluated several closed-loop control strategies (PID, LQR) achieving a 15% improvement in steady state performance.
- Conducted ocean field testing with 18 units, validating mesh network communication, autonomous control strategies, and hardware performance for robust real-world operation.

University College London (UCL), London, UK**September 2020 – 2024***BEng Mechanical Engineering with Control for Intelligent Systems – First Class Honors (4.0 GPA)*

- Capstone Project (4.0 GPA): Created an integrated car dashboard system that recognized and narrated the meaning of traffic signs for inexperienced drivers. Leveraged a custom neural network and refined training processes on 100,000 images using PyTorch. Achieved state-of-the-art precision, outperforming Meta's benchmark model.

PROFESSIONAL EXPERIENCE

Undaunted Robotics, Head of Robotics – Founding Engineer, Atlanta, USA**July 2025 – Present**

- Grew and led robotics as the fleet scaled from 10 to 150 robots in the field (largest robotic security provider in the Southeast). Owned the hardware, embedded software, reliability and deployment work.
- Led a 3-person team to build a security rover, field-deployed in 2 months (10 active). Owned motor-control and teleoperation firmware; built DFM partnerships to scale toward 200 units/yr.
- Redesigned the charging hub, taking heat-related fleet outages to zero (12 months) and unblocking ~\$620K in stalled deals.
- Diagnosed a single-vendor dependency after a cloud outage took entire fleet robot offline, architected control independent of the vendor's cloud and shipped it as a 5-min-per-robot field upgrade in 1 week.
- Replaced the off-the-shelf camera with a custom vision stack, improving reliability and unlocking new deal flow via a proprietary customer feed and police-integration capability.

Lockheed Martin, Systems Engineer, UK**June 2023 – June 2024**

- Owned system requirements for a safety-critical radar system, translating customer and manufacturer needs into 600+ traceable design requirements for cross-functional engineering teams.
- Built and ran software-in-the-loop tests to verify radar system performance, simulating communications across 200+ entities to validate system behavior ahead of integration.
- Led an object-detection R&D initiative to strengthen QA, presenting the engineering and financial case to senior executives and securing \$104K in pilot funding.

University College London, Machine Learning Researcher, London, UK**June – September 2022**

- Developed real-time image classification for skin disease diagnostics, achieving 90% accuracy using a phone camera.
- Collaborated closely with clinicians in the NHS to access private clinical datasets, implementing preprocessing steps to improve performance by 23%.
- Implemented signal processing and feature extraction techniques to improve model performance by 15%.

LEADERSHIP EXPERIENCE

CTO, Obsidian- Full Motion Tracking Wearables, Berkeley, USA**August 2024 – May 2025**

- Founded and led an interdisciplinary team of 5 to design and develop a connected wearable system that enhances athletic performance across multiple sports through real-time motion tracking and personalized feedback.
- Integrated IoT-enabled hardware and sensors, a machine learning recommendation system and sensor fusion algorithms (Kalman Filters) achieving 95% precision to actual movement.
- Implemented state estimation algorithms through various sensor readings (IMU, Strain gauges, barometer).

Head of Payload Subsystem, MACH22 National Rocketry Competition, London– 2nd / 32**September 2022 – May 2023**

- Led a 5-engineer payload team to design, build, and fly a CanSat to 1.5 km with successful parachute recovery.
- Co-founded UCL Rocketry; secured sponsorship and helped grow it into UCL's strongest competition engineering team.
- Owned CAD and deployment mechanisms for parachute and 360° camera systems into a 3D-printed CanSat shell.

RELEVANT SKILLS & INTERESTS

Robotics: *Sensor design & fusion, Motor Controller Operation, Controls, PCB Design, State Estimation, Kalman Filters***Software:** *C++, Python, ROS2, CAD (Fusion 360), I2C, CAN, UART, Linux, Simulink, Data Analytics (Pandas)***Hardware / Electronics:** *PCB design, motor drivers, IMU/strain/barometer sensors, CAN/I2C/UART, voltage routing, charging***Non-Technical:** *Technical Communication, Stakeholder Management, Agile, Data Analysis, Product Management, Mentorship*