

Lai Man To

Robotics / Embedded Systems Intern

tototofu0601@gmail.com • +852 6618 6981 • github.com/tototofu123 • lai.codes • Hong Kong

SUMMARY

Computer Engineering student at HKUST with competition-proven experience in Arduino embedded systems, BLE wireless integration, C++ firmware, and hardware-software co-design. Led a 4-person team to 1st place.

EDUCATION

BEng Computer Engineering & AI Expected 2027

The Hong Kong University of Science and Technology (HKUST)

- Relevant: Data Structures, AI Foundations, Robotics, Embedded Systems

HKDSE Class of 2023

TWGHs Wong Fut Nam College

- Level 5* English (Speaking); Level 5 English, Mathematics, Physics

ROBOTICS & EMBEDDED PROJECTS

Lead Robotics Engineer — All-in-One Combat Bot

Arduino · C++ · BLE · Mobile App

- Directed 4-person team to design and build a combat robot; 1st place among 20+ teams
- Developed custom mobile BLE controller app; optimised mechanical design for fastest navigation time
- Delivered technical presentation on system architecture and hardware-software integration to judges

Precision Line-Follower (Arduino)

C++ · Arduino IDE · IR Sensors · PID

- Embedded C++ firmware with PID-inspired motor logic; 90% precision on sharp-turn tracks — top tier
- Full hardware stack: IR sensor array, circuit soldering, voltage regulation

C++ PVE Combat Engine

C++ · OOP · Memory Management

- Modular OOP, state-machine, 10+ difficulty levels, no external libraries; optimised for constrained environments

EXPERIENCE

Vice President & Team Captain 2024 – Present

HKUST Sport Climbing Society

- Directed operations for 200+ members; 25% growth; maintained Git-managed website
- Secured 5 corporate sponsorships; presented to HKUST Sports Dept and LCSD

Climbing Coach & Counter Staff 2024 – Present

Lead Climbing Gyms

- Managed 300+ entry client database; delivered training programmes for 20+ students

SKILLS

Embedded & Hardware: C++, Arduino IDE, BLE, PID Control, IR Sensors, Circuit Soldering, Voltage Regulation, Shapr3D

Software: Python, JavaScript, Git, Docker, PostgreSQL

Languages: English (native), Cantonese (native), Mandarin (native), Hakka (intermediate)

AWARDS

- 1st Place — Course Competition, All-in-One Combat Bot (Fastest Navigation Time, 20+ Teams)