

LUCAS HAN

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Available July–September 2027

EDUCATION

University of Oxford

St Catherine's College

Oct. 2025 – Expected Jun. 2028

Oxford, UK

- BA Computer Science and Philosophy
 - Ranked in the top 10 in Computer Science and Philosophy Prelims.

Shenzhen College of International Education

- Outstanding Cambridge Learner Award: Attained a perfect score in Mathematics.

Aug. 2021 – Jun. 2025

Shenzhen, China

TECHNICAL SKILLS

- Languages: Python, JavaScript, Swift.
- Frameworks and tools: PyTorch, NumPy, React, Three.js, SwiftUI, Electron, Webots, pytest and XCTest.
- Development practices: AI-assisted coding and automated testing.

INTERNSHIP

Shenzhen Huyang Intelligent Innovation Co., Ltd.

Jul. 2026 – Aug. 2026

Robotics Algorithm Developer

- Developed a partially observable cleaning-robot simulator in Python, with procedural maps, contact-based obstacle discovery and reproducible evaluation.
- Implemented a PyTorch DQN planner with global/local CNN features, action masking and deterministic exploration to navigate unknown environments.
- Achieved 100% task completion across 900 benchmark maps and 150 additional unseen maps in discrete simulation.
- Integrated the planner with Webots and validated motion control and obstacle-navigation behaviour.

COMPETITIONS

- USACO Platinum division.
- Led a four-member team to a HiMCM Meritorious Award.
- BMO Merit Award; qualified for USAMO.

PROJECT EXPERIENCE

Independent Developer

Aug. 2023 – Present

- Use AI-assisted development across reinforcement learning, native app and 3D game projects, supported by automated tests for model outputs, concurrent edits and physics behaviour.

Wankai | 3D Physics Combat Game

Oxford Tripo Club

- Built a playable 3D combat game from scratch using JavaScript, React, Three.js and Electron, with local multiplayer, split-screen cameras and character/weapon selection.
- Implemented a custom 180 Hz fixed-step simulation, contact-driven movement and collision impulses; added automated physics and gameplay tests.

Personal AI Assistant | Swift and SwiftUI

- Built a native macOS assistant and iOS prototype that turn natural-language messages into linked records in a user-controlled Obsidian vault;
- Use of built-in large language model to analysis the data and displayed them by designing UI
- Added source checks, duplicate prevention, edit-aware undo and conflict resolution.

Xacademy Hackathon | Team Lead and Developer

Jul. 2023 – Oct. 2024

- Developed a 2D plotted game on the topic of “psychopaths” and led the team to the Best Creative Award.

LEADERSHIP & ACTIVITIES

SCIE DEV Club

Sep. 2023 – Jun. 2025

Club Leader

Shenzhen, China

- Taught game and web development.
- Helped maintain ScieToday, the school app for accessing organised website information.