

# Ethan D'Souza



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ethandsz



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## Education

### MSc Robotics & Artificial Intelligence

Expected First Class Honours  
University College London (UCL)  
London, United Kingdom

### BSc (Hons) Artificial Intelligence

Anglia Ruskin University  
First Class Honours  
Cambridge, United Kingdom

## Certifications

### Data Analysis with Python: Zero to Pandas

[Jovian.ai](#)  
Online Certification

### Machine Learning with Python: Zero to GBMs

[Jovian.ai](#)  
Online Certification

### Machine Learning Onramp

MATLAB Online Certification

### Deep Learning Onramp

MATLAB Online Certification

### Signal Processing Onramp

MATLAB Online Certification

### Image Processing Onramp

MATLAB Online Certification

## Experience

### Since 2025 UCL Aerial Research Intern

Developing and integrating SLAM algorithms on an X500 drone, using an onboard Jetson Nano for processing.

- Independently testing and implementing different SLAM frameworks and pointcloud processing via a Livox MID-360.
- Designing, building and documenting the entire process from software setup to hardware integration to mounting the stack on board.

### 2022 - 2025 Blackdot Solutions - Fullstack Software Developer [Blackdot Solutions](#)

Independently developed and maintained core functionality within data integration systems and web applications.

- Implemented Github actions to run automated tests as part of a continuous integration build pipeline which is still used today.
- Delivered presentations and demos during sprint review meetings, addressing the entire company.
- Integrated APIs into client-requested software for organizations such as HSBC, Deutsche Bank, and the Government of the United Kingdom, among others.

### 2021 - 2022 Openspace - Mobile App Developer [GitHub](#)

Developed a geo-location-based mobile game to encourage the exploration of Cambridge.

- Used Flutter and Dart to incorporate both major operating systems (Android and IOS).
- Used Google Cloud Platform to incorporate Google Map APIs.

### 2019 - 2020 Code Ninjas - Educational Tutor [Code Ninjas](#)

Supported students for academic progress in programming.

- Communicated with parents or guardians about trouble areas or any issues that required attention.

## Projects

### May 2025 GPS-Denied Drone Navigation

Engineered a GPS-denied drone navigation system using off-board LiDAR, featuring autonomous path planning and a fail-safe return.

- Designed and built a custom drone platform, including sourcing components, 3D modeling, and printing the frame.
- Enhanced an existing SLAM framework to create real-time occupancy grids and dynamically select waypoints within LiDAR coverage.

### Apr 2025 Laplacian Based Drone Swarm [Portfolio](#)

Developed a decentralized drone swarm control system using a Laplacian-based coordination method, implemented on Crazyflie drones as part of a research-driven academic project.

- Successfully deployed the system on multiple Crazyflie drones.
- Demonstrated obstacle-aware navigation through a field of poles without centralized control.

### Dec 2024 1st Place Winner at a Neuphonic X Google AI Hackathon [Neuphonic](#)

Built an ultra-low-latency object detection system for visually impaired users in under 4 hours, leveraging YOLO, Arducam, and a real-time text-to-speech API.