

Ethan D'Souza



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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

MATLAB Online Certifications

- Machine Learning
- Deep Learning
- Signal Processing
- Image Processing

Jovian.ai Certifications

- Data Analysis - [Certificate](#)
- Machine Learning - [Certificate](#)

Experience

- May 2025 - **University College London - Aerial Research Intern** [Here East](#)
- Present Developed and integrated SLAM solutions on an X500 drone, using an onboard Jetson Nano for processing.
- Independently implemented 2 SLAM frameworks on a drone to run autonomously for localizing and mapping the environment.
 - Documented software and hardware integration for a custom drone platform, including 3D modeling of components.
- Sep 2022 - **Blackdot Solutions - Fullstack Software Developer** [Blackdot](#)
- Feb 2025 Independently developed and maintained core functionality within data integration systems and web applications.
- Deployed automated testing with GitHub Actions, executing over 50 tests per day as part of a CI pipeline still in active use.
 - Showcased project progress during sprint reviews, engaging a wide audience of collaborators and stakeholders.
 - Integrated 5 APIs into production requested by organizations such as HSBC, Deutsche Bank, and the Government of the United Kingdom.
- Jan 2022 - **Openspace - Mobile App Developer**
- Jun 2022 Developed and launched 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.
 - Supported concurrent usage by 100+ users and handled over 5,000 API calls in a single day.
- Sep 2019 - **Code Ninjas - Educational Tutor** [Code Ninjas](#)
- Apr 2020 Tutored hundreds of students for academic progress in programming languages, mainly Python and Scratch.
- Taught fundamental coding concepts such as, loops, conditionals, and variables to students aged 7–14.
 - 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.
- Enhanced an existing SLAM framework to create occupancy grids and select waypoints within 5 meters of 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 3 Crazyflie drones and navigated through a field of 7 poles.
- Dec 2024 **1st Place - Neuphonic X Google AI Hackathon** [Neuphonic](#)
- Built an ultra-low-latency object detection system for visually impaired users in under 4 hours, leveraging YOLO, an Arducam, and a real-time text-to-speech API.