

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 - Present

University College London - Aerial Research Intern[Here East](#)

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 - Feb 2025

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

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.
 - Implemented 5 API integrations tailored to requirements from clients such as HSBC, Deutsche Bank, and the UK Government.
- Jan 2022 - Jun 2022

Openspace - Mobile App Developer

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

 - 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 - Apr 2020

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

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

Autonomous Underwater Drone Pollution Detection[Portfolio](#)

Developed a robotic system for autonomous environmental monitoring of river pollution using the BlueROV2 UUV.

 - Implemented an MPC controller to follow autonomous trajectories in river simulations.
 - Simulated pollutant flow with a PDE solver and generated reverse-time trajectories for upstream navigation.
- May 2025

GPS-Denied Drone Navigation

Engineered a GPS-denied drone autonomous navigation system using off-board LiDAR.

 - 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 a 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.