

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. <ul style="list-style-type: none">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. <ul style="list-style-type: none">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. <ul style="list-style-type: none">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. <ul style="list-style-type: none">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	UUV River Monitoring Portfolio
	Developed a robotic system for autonomous environmental monitoring of river pollution using the BlueROV2 UUV. <ul style="list-style-type: none">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. <ul style="list-style-type: none">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. <ul style="list-style-type: none">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.