

Jack Morgan

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EDUCATION

Durham University

MEng, Engineering (Aeronautical)

Durham, UK

September 2022 – July 2026

- Two-time Hatfield College Scholar predicted a high First Class Honours
- Recipient of the Outstanding Academic Achievement Award by the Durham University Engineering Department
- Student Affiliate Member of Royal Aeronautical Society and Institution of Mechanical Engineers

Dr Challoner's Grammar School

A-levels

Amersham, UK

September 2020 – June 2022

- A*, A*, A, A in Computer Science, Mathematics, Further Mathematics, Physics
- Held leadership positions as School Prefect; collaborated effectively with staff
- Achieved full marks in Computer Science Coursework on an Investigation of the Riemann Hypothesis

RESEARCH EXPERIENCE

Natural Language-Guided UAV Navigation using Large Language Models

Engineer, L4 Capstone Project

Durham, UK

October 2025 – April 2026

- Developing an intelligent UAV system enabling natural-language mission control via Large Language Models
- Integrating Pixhawk 6X, MAVLink, computer vision, and LLMs for autonomous navigation
- Aim to create a viable product and publish a high-quality research paper. Project supervisor Dr. Z Wei

Autonomous Surface Vehicle for Water Quality Monitoring and Sampling

Engineer, L3 Design Project

Durham, UK

October 2024 – March 2025

- Designed and built an ASV capable of autonomous navigation and water sampling of UK water networks
- Implemented autonomous control using Pixhawk and companion computers; with an effective sampling system
- Demonstrated project at L3 Design Expo. Supervised by Dr. Oliver Vogt and received a first-class project mark

Exploring Entrepreneurial Opportunities using Drones

Engineer, L3 Engineering

Durham, UK

June 2024

- Completed a project-focused UAV course supervised by Dr. Oliver Vogt, receiving a high first-class mark
- Built a UAV capable of autonomous flight and water sampling for Northumbrian Water's 'Project Kingfisher'
- Gained extensive experience with UAV systems design, Pixhawk, Ardupilot and flight control

Design of UAVs for Offshore Windfarm Inspection

Engineer, L2 Design Project

Durham, UK

October 2023 – March 2024

- Collaborated on the design of an autonomous drone for the inspection and monitoring of offshore wind farm turbines
- Conducted literature reviews on UAV navigation models, communication reliability and computer vision
- Engaged with industrial stakeholders to align design with commercial feasibility and safety standards

PROFESSIONAL EXPERIENCE

Northumbrian Universities Officer Training Corps – British Army

Senior Under Officer

Newcastle, UK

October 2023 - Present

- Delivering mentorship, leadership training, and professional development to soldiers as a platoon commander
- Achieved Gold and Silver medals on Ex Cambrian Patrol demonstrating high discipline and teamwork skills

Tec Line Ltd

Spares Department Engineer

Uxbridge, UK

July 2022 – Present

- Contributed to a national provider of engineering manufacturing, and maintenance services for catering equipment
- Diagnosed faults, interpreted technical manuals, and collaborated with field engineers to provide solutions
- Gained broad interdisciplinary experience across mechanical, electrical, and operational engineering environments