Suyash Agarwal

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Education

University of Oxford - MEng Engineering Science First Class (74%) *October 2020 – June 2024*

- Specialised in machine learning and vision, signal processing and control theory.
- Achieved a first-class degree and earned a Keble college academic scholarship.
- Won the 2024 Bennett prize for Best Final-Year Project Presentation.
- Recipient of a Diamond Jubilee Scholarship from the Institution of Engineering and Technology.

Experience

Software Engineer (Machine Learning) at Cortexlab, UCL *September 2024 – Present*

- Built an LLM-powered tool for automatic data analysis, now used by neuroscientists at Google DeepMind.
- Developed a novel computational method to analyse neural electrophysiology data, enabling neuroscientists to track neurons over longer timescales, with greater accuracy.
- We beat existing state-of-the-art methods by using self-supervised representation learning on the time-series electrical waveforms generated by the action potentials of individual neurons.

Research Intern at ETH Zurich *June 2023 – September 2023*

- Worked on robot manipulation at the Computer Vision Lab, as part of the ETH Robotics Student Fellowship.
- Built a ROS pipeline in C++ for grasp pose detection from point cloud data, performing collision checking and inverse kinematics on candidate grasps generated by a neural network and executing the optimal one.
- Developed software on Linux, using Python libraries such as PyTorch, OpenCV and numpy.

ORIon Team Member at Oxford Robotics Institute *January 2023 – June 2023*

- Member of the Human-Robot Interaction team within ORIon, the student robotics team of the ORI.
- Improved automatic speech recognition by 21% using models from Google and OpenAI and reduced noise.
- Used Python for digital signal processing and practised both functional and object-oriented programming.

Intern at Rolls-Royce Innovation Hub, Derby *June 2022 – September 2022*

- Completed a feasibility study on a proposal for solar radiation management using artificial intelligence.
- Identified and evaluated emerging technologies, focusing on robotics and smart sensor technology.

Projects

Research at Visual Geometry Group, University of Oxford *2025 – Present*

- Researching transformer efficiency for video understanding.

Masters' Project, Oxford Robotics Institute *2023 – 2024*

- First-author publication in IET Radar, Sonar & Navigation Journal.
- Research project on Bayesian deep learning, supervised by Prof. Paul Newman and Dr. Matthew Gadd.
- Developed highly scalable radar-based place recognition by classification, for autonomous vehicles.

Other Projects, University of Oxford *2022 – 2023*

- Designed a new beam profile monitor for the Large Hadron Collider at CERN (group project).
- Computation project on optimisation for regression and classification models.

Skills, Awards & Interests

Software skills	Python, SQL, C++, Docker, Linux, C, React, NodeJS, Flask, MATLAB, ROS, Bash, Git
Other skills	Object-oriented programming, Simulink, LaTeX, Hindi
Awards	Top Gold Award in British Physics Olympiad (top 50 in UK), CREST Gold Award, British Mathematical Olympiad, UKMT Intermediate Olympiad medals (top 50 in UK)
Interests	Captain of Mens' Seals tennis team at Oxford University Lawn Tennis Club for 2 years, Guitar (Grade 8 achieved with merit), Bouldering, Running