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

Research Engineer at Cortexlab, UCL *September 2024 – Present*

- Built Alfred, an LLM-powered tool for automatic data analysis, now used by researchers at Google DeepMind.
- Developed a novel method to identify neurons in electrophysiology data, enabling neuroscientists to track more neurons over longer timescales and with greater accuracy. The method uses a proprietary autoencoder architecture and contrastive learning on time-series waveforms generated by action potentials.
- Currently writing a first-author paper on this project, which beat existing state-of-the-art methods.
- Working on a data curation tool for multi-channel 3D volumetric calcium imaging data from Suite3D.

Data Science/ML Consultant for stealth startup *May 2025 – September 2025*

- Developed and validated proof-of-concept models to establish key indicators of data quality and generalisability, directly informing an early-stage neurotech/AI startup's core IP.
- Authored a technical whitepaper on data exploration outcomes, which has been used to secure a $3m venture capital investment offer.

Research Intern at Computer Vision Lab, ETH Zurich *June 2023 – September 2023*

- Built a ROS pipeline in C++ for robotic grasp pose detection from point cloud data, successfully performing collision checking and inverse kinematics on candidate grasps and executing the optimal one.

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

- Improved word error rate for speech recognition by 21% by integrating an OpenAI API and reducing noise.

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.

Projects

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

- Investigating the use of log-polar transformations to improve the efficiency of vision transformers.

Masters' Project, University of Oxford *2023 – 2024*

- Published a first-author paper in IET Radar, Sonar & Navigation Journal on a novel, scalable radar-based place recognition system for autonomous vehicles.
- Introduced principled uncertainty estimation into a ResNet architecture via Bayesian deep learning, enabling safer and more trustworthy navigation in challenging conditions.

Skills, Awards & Interests

Programming languages	Python, SQL, C++, C, MATLAB, Bash
Frameworks & Tools	PyTorch, Docker, Linux, React, NodeJS, Flask, ROS, Git, LaTeX
Awards	Top Gold Award in British Physics Olympiad (top 50 in UK), British Mathematical Olympiad, CREST Gold Award, 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, Bouldering, Running, Fluent in Hindi