

Animesh Srivastava

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Education

- University College London - MSc in Machine Learning** 2023 - 2024
- Expected grades: Merit
 - Relevant modules: Machine Vision, Supervised Learning, Robot Vision and Navigation, Applied ML, Bayesian Deep Learning, Applied DL, Information Retrieval and Data Mining, Graphical Models
 - Dissertation: "High Resolution Novel View Synthesis with 3D Gaussian Splatting" under UCL's Industry Exchange Network
- St Stephen's College, University of Delhi - BSc in Physics (Hons)** 2019 - 2022
- Final grades: **8.42/10**, equivalent to First-Class Honours, UK
 - Selected modules: Quantum mechanics, Astrophysics, Linear Algebra and Tensor Analysis, Advanced Calculus, Computational Physics and Probability and Statistics
 - Recipient of the INSPIRE scholarship, awarded by Government of India
- St Dominic Savio College, India - Secondary Education** 2017 - 2019
- Class 12th (equivalent to A-levels, UK): **97.6%** Physics, Chemistry, Mathematics, English, Computer Science
 - Class 10th (equivalent to GCSE, UK): **95.5%**

Experience

- Machine Learning Intern - Bodymetrics, London, UK** May 2024 - Sep 2024
- Optimised 3D gaussian splatting pipeline for high resolution Novel View Synthesis (NVS) of fashion models from ultra-high resolution training images
 - Created a new custom dataset, performed data pre-processing, hyperparameter tuning and refined training loss functions to enhance PSNR, SSIM and LPIPS metrics of NVS
 - Integrated GroundingDino, a zero-shot object detection model into the pipeline, reducing training time by 20% while preserving the rendering quality of foreground subjects in NVS
 - Developed an interactive website to show differences in NVS across models, providing insights into model parameters and highlighting areas where the model failed
- Geospatial Analyst - Pixxel, Bengaluru, India** Jan 2023 - Jul 2023
- Designed a regression based ML model to monitor farm level crop growth from satellite images
 - Implemented semantic segmentation, NDVI extraction, time series analysis and K-means clustering algorithms
 - Built an interactive dashboard for real-time monitoring and decision-making
 - Optimised and scaled the model for deployment on the company's Earth monitoring platform, enabling global real-time crop growth monitoring
- Machine Learning Intern - Spartificial, India** Nov 2022 - Jan 2023
- Developed a U-Net based CNN to detect active fire regions with multispectral satellite images
 - Engineered and utilised custom spectral indices and other band-specific thresholds to enhance the detection of active fire pixels
 - Evaluated model performance on IoU, precision, recall and dice coefficient metrics
- Summer Research Fellow - Raman Research Institute, Bengaluru, India** Jul 2021 - Sep 2021
- Solved differential equations and simulated satellite trajectories to optimise lunar orbits, eliminate station-keeping manoeuvres and fulfil mission objectives
 - Presented findings on lunar orbit design and analysis at the Astronomy and Astrophysics Club at RRI and the Indian Academy of Sciences

Skills

Programming Languages: Python, JAVA, C++, C#, MATLAB, ARDUINO, ESP32
ML and DS tools: Pandas, Numpy, PyTorch, TensorFlow, Scikit-learn, Matplotlib, Plotly/Dash, SciPy, GDAL, Rasterio, pySTAC, GeoPandas, xarray/rioxarray,
Other: Git and GitHub, Docker, FastAPI, VSCode, QGIS, Meshlab, CloudCompare, Unity, MS Excel, VBA, Word, PowerPoint, LaTeX, Linux (Ubuntu), JIRA

Certificates

- Advanced Techniques with TensorFlow (Coursera): Specialisation in custom models, distributed training, computer vision, autoencoders, and generative deep learning
- IELTS score 8.0

Visa sponsorship

Eligible to work in the UK without the need for visa sponsorship