Meghana Rao Somepalli

Machine Learning Engineer

London, UK | meghanarao.99@gmail.com | mejhana.github.io | linkedin.com/in/meghana99

Skills/Technologies

Technical: Generative AI, Computer Vision, Computer Graphics, Image Processing, LLMs, 3D Modelling
Languages: Python, MATLAB
Platforms/Libraries: PyTorch, LangChain, Hugging Face, AWS SageMaker, TensorFlow/Keras, OpenCV, Blender
Certifications: NVIDIA (Diffusion Models, RAG Agents), DeepLearning.AI (LangChain, Chat with Your Data)

Education

UCL (University College London)   **London, UK**
MSc in Computer Graphics, Vision, and Imaging (Merit)   September 2022 - September 2023

Thesis: Q-MoGraph—Generated a motion sequence of a 3D character following a user-defined path while performing specific actions like "walking" or "ballet" using the **motion graph** algorithm by Kovar et al. (2002) and a **T2M-GPT** (a multi-modal text-to-motion model; vector qualitised-variational autoencoder (VQ-VAE) mapped to a transformer) model by Zhang et al. (2023)

Amrita Vishwa Vidyapeetham   **Bengaluru, India**
BTech in Computer Science Engineering (CGPA: 9/10)   July 2018 - August 2022
(Awarded a 75%-tuition scholarship)

Experience

Polaron   **London, UK**
Machine Learning Engineer   August 2024 - Present

Improved on Polaron's **dimension-expanding GAN** architecture for homogeneous microstructure generation and developed advanced analytical tools for microstructure interpretation, and contributed to the team awarded the **Manchester Prize**.

MeetImmi   **London, UK**
Founding Machine Learning Engineer   January 2024 - August 2024

Developed a production-ready **retrieval-augmented generation (RAG)** based conversational AI assistant that provides tailored immigration advice to empower people to live and work wherever they want.

Bosch   **Bengaluru, India**
Data Scientist Intern   January 2022 - June 2022

Developed a data pipeline for **predicting battery drainage** in electric vehicles and analysing influential features from sensors to streamline data collection. Trained regression models using sensor data (altitude, temperature, terrain).

ISRO (Indian Space Research Organisation)   **Bengaluru, India**
Research Scientist Intern   January 2021 - March 2021

Developed systematic error prediction algorithms such as **extreme learning machine** with the nature-inspired bat algorithm to increase the accuracy of the centre of mass (CoM) algorithm by 40%. Investigated the impact of smoothing filters (**Savitzky-Golay**) on CoM accuracy.

Publications

Implementation of Single Camera Markerless Facial Motion Capture using Blendshapes   January 2022

5th International Conference on Computational Systems and Information Technology for Sustainable Solution (CSITSS)

Meghana Rao Somepalli, M.D. Sai Charan, S Shruthi, Suja Palaniswamy
10.1109/CSITSS54238.2021.9683460