Melonie de Almeida

Education

University of Glasgow — Glasgow, United Kingdom

PhD. Computer Science — September 2022–present

- My research focuses on developing probabilistic methods for 3D and 4D reconstruction, particularly in scenarios where data availability is limited or highly constrained.
- Supervisors: Dr. Paul Henderson & Dr. John Williamson

MSc. Data Science

- MSc Project: Stable Diffusion Model for Future Frame Generation
- Supervisor: Dr. Paul Henderson

University of Moratuwa — Colombo, Sri Lanka

BSc. (Hons) in Computer Science and Engineering — October 2016–March 2021

- BSc Project: Legal Party Extraction from Legal Opinion Texts Using Deep Recurrent Neural Networks
- Supervisors: Dr. Shehan Perera & Dr. Nisansa de Silva

Publications

[1] **M. de Almeida**, D. Ivanova, T. Shi, J. H. Williamson, and P. Henderson, "Pixel-to-4D: Camera-Controlled Image-to-Video Generation with Dynamic 3D Gaussians," in Proceedings of the International Conference on Pattern Recognition (ICPR), 2026 (*accepted*).

[2] **M. de Almeida**, G. Brydon, D. M. Persaud, J. H. Williamson, and P. Henderson, "Neural 3D Reconstruction of Planetary Surfaces from Descent-Phase Wide-Angle Imagery," in IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2026 AI4Space Workshop, 2026 (*accepted*)

[3] P. Henderson, **M. de Almeida**, D. Ivanova, and T. Anciukevičius, "Sampling 3D Gaussian Scenes in Seconds with Latent Diffusion Models," in International Joint Conference on Neural Networks (IJCNN) 2026 Main Track, 2026 (*accepted*)

[4] T. Shi, **M. de Almeida**, D. Ivanova, N. Pugeault, and P. Henderson, "Splat-Portrait: Generalizing Talking Heads with Gaussian Splatting," in International Conference on Multimedia Modeling, 2026, pp. 494–507

[5] **M. de Almeida**, C. Samarawickrama, N. de Silva, G. Ratnayaka, and S. Perera, "Identifying Legal party Members from Legal Opinion Text using Natural Language Processing," in The 23rd International Conference on Information Integration and Web Intelligence, 2021, pp. 259–266

[6] **M. de Almeida**, C. Samarawickrama, N. de Silva, G. Ratnayaka, and A. Perera, "Legal Party Extraction from Legal Opinion Text with Sequence-to-Sequence Learning," in 2020 20th International Conference on Advances in ICT for Emerging Regions (ICTer), IEEE,2020, pp. 143—148

[7] C. Samarawickrama, **M. de Almeida**, N. de Silva, G. Ratnayaka, and S. Perera, "Legal Party Extraction from Legal Opinion Texts using Recurrent Deep Neural Networks," Journal of Data Intelligence, vol. 3, no. 3, pp. 350–365, 2022

[8] C. Samarawickrama, **M. de Almeida**, N. de Silva, G. Ratnayaka, and A. Perera, "Party Identification of Legal Documents using Co-reference Resolution and Named Entity Recognition," in 2020 IEEE 15th International Conference on Industrial and Information Systems (ICIIS), IEEE, 2020, pp. 494–499

Work Experience

Graduate Teaching Assistant (GTA) Glasgow, United Kingdom
University of Glasgow September 2024 –present

- Machine Learning - Tutor & Marker
- Text as Data - Tutor & Marker
- Deep Learning - Marker
- Introduction to Data Science - Marker
- Information Visualization - Tutor
- Programming - Tutor, Marker, & Exam invigilator

Machine Learning Engineer California, United States (Remote)
H2O.ai March 2021 –September 2022

- My role involved automating feature engineering, model training and evaluation processes, ensuring data for model training is cleaned and readily available and facilitating of the flow of data between Machine Learning models and an organization's data systems.
- Mentored a Machine Learning Engineering intern.

Research Intern Singapore
Nanyang Technological University, Singapore July 2019 –December 2019

- Lab - Data Management & Analytics Lab, School of Computer Science & Engineering
- Designed and implemented deep learning-based models to identify highly central nodes in big graphs using deep reinforcement learning and graph convolutional neural networks.
- Mentored 2 junior research interns

Reviewing

[1] International Joint Conference on Neural Networks (IJCNN) 2026

[2] IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2025

Volunteering Experiences

- Convener - Computer Vision Autonomous Systems (CVAS) Research group, University of Glasgow 2024-2025
  Organized weekly meetings for the CVAS research group, part of the Information, Data and Analysis (IDA) Section at the University of Glasgow. Responsibilities included scheduling meetings, sending reminders, and introducing speakers, as well as facilitating member presentations and discussions on computer vision and autonomous systems research.

References

Dr. Paul Henderson
Lecturer, University of Glasgow

- paul.henderson@glasgow.ac.uk
- https://www.pmh47.net/