

EDUCATION

- **University College London** 09.2022 – 09.2023
- Distinction, MSc. in Computer Graphics, Vision and Imaging
 - Ranking & award: Top 5%; best thesis honourable mention.
 - Thesis supervised by Prof Niloy Mitra: Instant-NeRF2NeRF: edit neural radiance field in seconds [\[link\]](#).
 - Relevant modules: Computer Graphics (90%), Image Processing (93%), Inverse Problems in Imaging (80%).
 - Other relevant module projects:
 - Machine Learning (ML) for Visual Computing project (89%): explored the neural network attack, backpropagation in CNN matrix form, and various unsupervised generative models;
 - Acquisition and Processing of 3D Geometry projects (85%&86%): explored point-to-plane point cloud registration; mesh analysis and denoise with spectral analysis, and implicit diffusion flow-based methods;
 - Virtual Environment essay (87%): Discuss issues in the characters' hand avatar and pose estimation in virtual reality and propose potential solutions [\[pdf\]](#).
- **The University of Birmingham** 09.2021 – 09.2022
- Distinction. MSc. in Artificial Intelligence and Machine Learning.
 - Relevant modules: Neural Computation (84%), Mathematical Foundations of AI & ML (83%).
 - Other relevant module projects: deep learning-based 3D human pose estimation from images/videos (90%).
 - Thesis supervised Prof Hyung Jin Chang: Anomaly detection based on adversarial screening [\[pdf\]](#).
- **The University of Essex** 11.2017 – 06.2021
- BSc. in Electronic System Engineering.
 - Final year project supervised by Prof John Gan and Prof Jun Feng: Image classification in deep learning [\[pdf\]](#).
- **Northwest University** 09.2017 – 07.2021
- B.Eng. in Electronic Information Science and Technology
 - First-class scholarship.

PUBLICATION

- **Wang, B., Dutt, N.S. and Mitra, N.J., 2024.** Proteusnerf: Fast lightweight nerf editing using 3d-aware image context. Proceedings of the ACM on Computer Graphics and Interactive Techniques, 7(1), pp.1-17. [\[project page\]](#).

RESEARCH EXPERIENCES

- **Research Assistant** at University College London 05.2023 – present
- Work with Prof Niloy Mitra at Smart Geometry Processing Group to explore 3D/4D editing from videos.
 - Work with Prof Raymond Dolan and Dr Kevin Li at Max Planck UCL Centre to explore the computational principles of human intelligence - "intuitive physics" using machine learning methods.
- **Research Assistant** at University of Cambridge 10.2023 – 1.2024
- Work with Dr Fangcheng Zhong to explore 3D hybrid semantic representation.

OTHER EXPERIENCES

- **Chair** of Data Science Society at Goodenough College 09.2023 – present
- **Coach** of international programming contest teams 12.2019 – 10.2021
- The team of Northwest University for ACM-International Collegiate Programming Contest (ACM-ICPC)
 - The team of High School Affiliated to Renmin University of China for The Olympiad in Informatics
 - >10 won 1st prizes in National Olympiad in Informatics in Provinces; 2 won gold and silver medals in the Asia-Pacific Informatics Olympiad 2020 & 2021 and joined the China national junior Olympiad team.
 - Taught modules: graph theory; number theory; game theory; dynamic programming and data structures.
- **Silver Medallist**, ACM-ICPC Asia-East Continent Final [\[pdf\]](#) 2019
- Rank 2% among > 3000 teams
 - Team leader. Obtained 4 silver medals in total in ACM-ICPC regional contests [\[2, 3, 4\]](#)