Jianhao Yuan

+44 7903560507 | LinkedIn | GitHub | Website | Oxford, UK

Education

University of Oxford — Oxford, UK
PhD in Robotics, Mobile Robotics Group, Embodied AI, Multimodal Learning — *Oct 2023 – Present*
Supervisors: Dr. Daniele De Martini and Prof. Paul Newman

University of Oxford — Oxford, UK
MEng. in Engineering Science, First Class Honors — *Sep 2019 – Jun 2023*
Supervisors: Prof. Nick Hawes and Prof. Clive Siviour

Selected Publications

Full Publication list on [Google Scholar]

[1] Not Just Pretty Pictures: Toward Interventional Data Augmentation Using Text-to-Image Generators. Jianhao Yuan*, Francesco Pinto*, Adam Davies*, Philip Torr. International Conference on Machine Learning (ICML), 2024. [Link]

[2] Real-Fake: Effective Training Data Synthesis Through Distribution Matching. Jianhao Yuan, Jie Zhang, Shuyang Sun, Philip Torr, Bo Zhao. International Conference on Learning Representations (ICLR), 2024.[Link]

[3] Hidden in Plain Sight: Evaluating Abstract Shape Recognition in Vision-Language Models. Arshia Hemmat, Adam Davies, Tom A. Lamb, Jianhao Yuan, Philip Torr, Ashkan Khakzar, Francesco Pinto. Conference on Neural Information Processing Systems (NeurIPS Dataset&Benchmark), 2024.

[4] RAG-Driver: Generalisable Driving Explanations with Retrieval-Augmented In-Context Learning in Multi-Modal Large Language Models. Jianhao Yuan, Shuyang Sun, Daniel Omeiza, Bo Zhao, Paul Newman, Lars Kunze, Matthew Gadd. Robotics: Science and Systems (RSS), 2024. [Link]

Experience

Amazon — London, UK
Applied Scientist Internship — *Sep 2024 – Present*
- Work on controllable and consistent content generation with diffusion-based video generative model.

Oxa — Oxford, UK
Research Internship — *May 2024 – Aug 2024*
- Work on scenario generation and explanation for autonomous driving navigation using generative world model.

Beijing Academy of Artificial Intelligence (BAAI) — Beijing, China
Research Internship — *May 2023 – Sep 2023*
- Conduct investigation into the utility of image generative models in synthetic data generation for OOD generalization, scalability, and privacy preservation.

Torr Vision Group, University of Oxford — Oxford, UK
Research Internship — *Jun 2022 – Present*
- Conduct investigation into text-to-image models to develop a controllable causal mechanism for disrupting spurious correlations, enhancing image classifier reliability.

Awards & Achievements

Distinction Scholarship: Awarded for academic excellence in 2020, 2021, and 2022.

Rokos Award: Granted for research internship from Rokos Capital Management and Pembroke College

Academic Services

Journal Reviewer: IJCV, TMLR, RA-L
Conference Reviewer: ICLR, ICRA