

EDUCATION

University of Cambridge 2021 - Now

Cambridge, UK

PhD Computer Science

Research Interests: computer vision, neural implicit representation, image-based rendering, novel view synthesis

University College London (UCL) 2017 - 2021

London, UK

MEng Computer Science

First Class Honours (Average 84%)

Dean's List Award

RESEARCH EXPERIENCE

Kubric Oct – Nov 2021

- **Data Generation:** participated in [Kubric](#), a Google research project on data generation pipeline. We demonstrated the effectiveness of data synthesized by challenging existing data-driven researches.
- **Surface Reconstruction:** generated datasets with varying properties including non-genus-0 topology, non-textured surface, sharp edges, non-rigid motion to challenge [LASR](#), a method for reconstructing surface geometry from video.

DualNeRF - UCL Master Thesis Sep 2020 – Apr 2021

- Continued on previous research internship and carried out further research on neural implicit representation with [Prof. Lourdes Agapito](#).
- **Novel View Synthesis:** incorporated multi-view consistency and local feature extraction.
- **Dual NeRF-like Decoders:** a local decoder conditioned on pixel-wise local feature and a global decoder conditioned on global feature.
- **Depth Query:** Compared to [pixelNeRF](#), we further simplify the network input to replace 3D coordinate with a single "depth" query.

UCL Research Internship July – Sep 2020

- **Computer Vision:** carried out Computer Vision research in [UCL Vision and Imaging Science group](#).
- **3D Reconstruction:** aimed to achieve unsupervised generalisable 3D reconstruction from a single RGB image via implicit neural representation (NeRF).
- **Multi-View Consistency:** Applied 3D rotation equivariant to further constrain the extracted feature.

TECHNICAL SKILLS

- **Programming Languages:** Python, C, C#, Java, Node JS, Haskell, SQL, HTML/CSS.
- **Technology/Platform:** Familiar with automated testing (Java, Python, Node JS). Worked with Linux, Unity, Arduino.
- **Spoken Language:** Fluent in English. Native speaker of Mandarin. Beginner of Japanese.

WORK EXPERIENCE

Uni of Cam Supervisor/Ticker Oct – Now

- **Teaching:** Supervising students of the Further Graphics module, marking their work and answering their questions about the course.

Software Engineering Internship Jun – Aug 2019

- **NodeJS App:** developed a mobile app that runs marathon events for charity at Softwire. User can link marathons to their fundraisings on JustGiving.

PROJECTS

Influenza Prediction Python (TensorFlow, SK Learn)

- **Time Series Forecasting:** worked under [Prof. Ingemar Cox](#)'s supervision to develop a machine learning model to predict infection rate of Influenza-like-illness (ILI).
- **Google Query Auxiliary:** provided frequencies of Google queries that contain ILI keywords as side information to the model to improve performance.

Review Analysis System Python (TensorFlow, SK Learn)

- **Natural Language Processing:** worked with Ocado 10X team to develop a Natural Language Processing model to assess the helpfulness of customer reviews from text.

Hero's Battle Unity, C#, PHP, SQL

- **Game Development:** Led a team of 3 working with Microsoft Research to develop a therapy game that helped Cystic Fibrosis patients to continue repetitive therapies.

AWARDS & ACHIEVEMENTS

UCL Dean's List Award

- Awarded to students with outstanding academic performance.

Google Hash Code 2019 – UK Ranking 21st

- Best score in UCL.
- Global ranking 449th.

Duke of Edinburgh Bronze Award

- Participated in a series of skill learning, volunteering and expedition.