Shengqu Cai

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EDUCATION

since 2023	**Stanford University**, California, USA PhD in COMPUTER SCIENCE
2020 - 2023	**ETH Zürich**, Zürich, Switzerland MSc in COMPUTER SCIENCE, *Major in Visual Computing* GPA: 5.7/6.0, Major GPA: 6.0/6.0
2017 - 2020	**King's College London**, London, United Kingdom BSc (Hons) in COMPUTER SCIENCE Average: 90% (GPA: 4.0/4.0, $\approx$ top 1%), graduated with First Honour

RESEARCH EXPERIENCE

2022	Visiting Student Researcher at **Stanford University**, California, USA Master thesis at Stanford Computational Imaging Group. Project: Unsupervised one-shot scene extrapolation. Paper published at ICCV'2023 [1]. Supervisor: Prof. Gordon Wetzstein
2021	Research Student at **ETH Zürich CVL & Toyota TRACE**, Zürich, Switzerland Project: Unsupervised one-shot novel view synthesis. Paper published at CVPR'2022 [2]. Patent filed [A]. Supervisor: Dr. Dengxin Dai, Prof. Luc Van Gool
2019 - 2020	Research student at **King's College London**, London, United Kingdom Bachelor final thesis, received high distinction(85%). Project: Invariant Information Clustering with videos. Supervisor: Dr. Michael Spratling

PUBLICATION

[1] DiffDreamer: Towards Consistent Unsupervised Single-view Scene Extrapolation with Conditional Diffusion Models
Shengqu Cai, Eric Ryan Chan, Songyou Peng, Mohamad Shahbazi, Anton Obukhov, Luc Van Gool, and Gordon Wetzstein.
In: ICCV, 2023.

[2] Pix2NeRF: Unsupervised Conditional π-GAN for Single Image to Neural Radiance Fields Translation.
Shengqu Cai, Anton Obukhov, Dengxin Dai, and Luc Van Gool.
In: CVPR, 2022.
Featured: NeRF at CVPR 2022, datagen.tech, metaphysic.ai, etc.

PATENT

[A] System for Unsupervised Single Image to Neural Radiance Fields Translation
European patent: EP 22 158 531.8.
Application filed in 2022 by Toyota.

Teaching Experience

2019	Practical Experiences Of Programming, King's College London

Industrial Experience

2023	Research Intern at **Adobe Research**, San Jose, USA Research on enhancing video editing tools. Mentor: Dr. Duygu Ceylan.
2020	Technology Analyst at **China National Petroleum Corporation**, Shenyang, China
2018	Software Engineer at **Neusoft**, Shenyang, China
2018	Software Engineer at **China National Petroleum Corporation**, Shenyang, China

Projects

2021	Real Time Photorealistic Neural Rendering in VR at **Computer Vision and Learning Group, ETH Zürich**, Zürich, Switzerland Description: Deploy per-frame translation module on Oculus Quest 2 using Barracuda and Unity.
2021	Viewpoint Adaptation in a Synthetic Environment at **Computer Vision and Geometry group, ETH Zürich**, Zürich, Switzerland Description: SLAM module training augmentation with synthetic world model correspondence. Part of the working package available here.
2021	Semi-supervised Semantic Amodal Hand Gesture Segmentation at **ETH Zürich**, Zürich, Switzerland Description: Occluded hand gesture segmentation with semi-supervised pipeline.
2020	Adapt RCNN for Natural language to SQL Translation at **ETH Zürich**, Zürich, Switzerland
2018	Ocado Multi-agent Planning at **King's College London**, London, United Kingdom
2018	Adapt Deep learning to Episodic non-Markov Localization at **King's College London**, London, United Kingdom

Academic services

Conference review:	ECCV22, CVPR23, ICCV23, NeurIPS23
Journal review:	IJCV23, Computing Surveys

Languages

English:	Fluent
Chinese:	Mothertongue