

HENGFEI WANG

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🎓 EDUCATION

University of Birmingham (UOB) , Birmingham, UK	Sep. 2020 – Present
<i>PhD student</i> in Computer Science (CS), expected June 2024	
Tsinghua University (THU) , Beijing, China	Aug. 2013 – Jun. 2020
<i>Master Degree</i> in Mechanical Engineering (ME), GPA: 86/100	Sep. 2017 – Jun. 2020
<i>Bachelor Degree</i> in Mechanical Engineering (ME), GPA: 87.3/100	Aug. 2013 – Jun. 2017
<i>Second Bachelor Degree</i> in Business Administration (BA), GPA: 88.2/100	Aug. 2013 – Jun. 2017

💻 RESEARCH EXPERIENCE

DeNeRF – High-Fidelity Eye Animatable Neural Radiance Fields	Aug. 2022 – June. 2023
<i>PhD project</i> Supervisor: Dr. Hyung Jin, Chang & Prof. Ales Leonardis	
<ul style="list-style-type: none">Propose DeNeRF which learns a dynamic face NeRF model from multi-view images.Design a new fitting process for FLAME model, ensuring consistency across multiple views.Define a unified canonical space to construct a rotation-aware manifold with facial parameters.Enable high-fidelity face rendering under novel eyeball poses and head poses and enhance the performance of the downstream gaze estimation task with rendered data.	
GazeCaps – Gaze Estimation with Self-Attention-Routed Capsules	Sep. 2021 – June. 2022
<i>PhD project</i> Supervisor: Dr. Hyung Jin, Chang & Prof. Ales Leonardis	
<ul style="list-style-type: none">Propose a novel framework that utilizes the capsule concept to solve the problem of gaze estimation. The capsules show a better representational ability compared with CNN-based and Transformer-based methods by encapsulating different facial properties.Propose a new SAR module (self-attention routing) which does not require iterations for optimization.The proposed GazeCaps achieves state-of-the-art performance in different benchmarks.	

👤 PROFESSIONAL ACTIVITY

- Website chair of Gaze Workshop at CVPR2022 and CVPR2023
- Reviewer in CVPR2021, CVPR2022, AAAI2022, ECCV2022
- Caretaker of the biggest gaze work repository on Github - Awesome Gaze Estimation

📄 PUBLICATION

- Hengfei Wang**, Zhongqun Zhang, Yihua Cheng, Hyung Jin Chang. "High-Fidelity Eye Animatable Neural Radiance Fields for Human Face." Arxiv preprint, 2023.
- Hengfei Wang**, Jun O. Oh, Hyung Jin Chang, Jin Hee Na, Minwoo Tae, Zhongqun Zhang, Sang-Il Choi. "Gaze-Caps: Gaze Estimation With Self-Attention-Routed Capsules." Computer Vision and Pattern Recognition Workshops (CVPRW), 2023.
- Hengfei Wang**, Zandong Han, and Qingxian Ma, "Robotic system with power line communication for in-pipe inspection of underground urban gas pipeline.", International Conference on Robotics and Automation Engineering (ICRAE), 2019.

💖 HONORS AND AWARDS

<i>China Scholarship Council (CSC) Scholarship, Chinese Government</i>	Sep. 2020
<i>Best Oral Presentation of ICRAE 2019</i>	Nov. 2019
<i>China National Encouragement Scholarship, Chinese Government</i>	Jun. 2014

⚙️ SKILLS

- Programming Languages: Python > C++ = C > C#
- Deep learning framework: Pytorch > Tensorflow
- Platform: Familiar with Linux, Windows, MacOS