Qichen Fu

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EDUCATION

Carnegie Mellon University, School of Computer Science Pittsburgh, PA
Master of Science in Robotics; GPA: 4.24/4.33 *Aug. 2020 - Aug. 2022*
Teaching Assistant: Visual Learning and Recognition (2022), Computer Vision (2021)

University of Michigan - Ann Arbor, College of Engineering Ann Arbor, MI
Bachelor of Science in Computer Science (dual degree with SJTU); GPA: 4.00/4.00 *Aug. 2018 - Apr. 2020*
Instructional Aide: Computer Vision (2019, 2020)

Shanghai Jiao Tong University Shanghai, China
Bachelor of Engineering in Electrical and Computer Engineering (dual degree with UM); GPA: 3.73/4.00 *Sept. 2016 - Aug. 2020*

WORK EXPERIENCE

Apple Inc. Seattle, WA
Machine Learning Engineer in AI/ML - Machine Intelligence Neural Design (MIND) *Aug. 2022 - Present*
- Working on efficient LLMs, efficient NeRFs, and 3D Hand-Object Interaction

RESEARCH EXPERIENCE

KLab, Carnegie Mellon University Pittsburgh, PA
*Research Assistant; **Advisor:** Prof. Kris Kitani* *Oct. 2020 - Aug. 2022*
- Led the video de-identification, state change object detection benchmark and challenge development of the EGO4D dataset
- Proposed a pixel-wise voting function with Relational Box Field to robustly detect active objects under occlusions
- Proposed a Dynamic Fusion Transformer framework for robust 3D hand pose estimation from videos

Fouhey AI Lab, University of Michigan Ann Arbor, MI
*Research Assistant; **Advisor:** Prof. David Fouhey* *May 2019 - May 2020*
- Developed an unsupervised object detection system predicting bounding boxes and articulation type for objects in video
- Built an artificial object detection system for image filtering, reaching an accuracy of 95.06% and an AUC score of 0.92

Fessler Research Group, University of Michigan Ann Arbor, MI
*Research Assistant; **Advisor:** Prof. Jeffrey A. Fessler, Prof. Yuni Dewaraja* *Oct. 2018 - May 2020*
- Proposed a complex-valued U-Net for MRI reconstruction, reducing parameters by 50% compared to the vanilla U-Net
- Developed a novel method integrating back-projection and 3D U-Net for PET reconstruction directly from measurements

PUBLICATIONS

Speculative Streaming: Fast LLM Inference without Auxiliary Models arXiv Preprint 2024
*Nikhil Bhendawade, Irina Belousova, **Qichen Fu**, Henry Mason, Mohammad Rastegari, Mahyar Najibi*

FastSR-NeRF: Improving NeRF Efficiency on Consumer Devices with A Simple Super-Resolution Pipeline WACV 2024
*Chien-Yu Lin, **Qichen Fu**, Thomas Merth, Karren Yang, Anurag Ranjan*

eDKM: An Efficient and Accurate Train-time Weight Clustering for Large Language Models IEEE CAL 2024
*Minsik Cho, Keivan A Vahid, **Qichen Fu**, ..., Peter Zatloukal*

Deformer: Dynamic Fusion Transformer for Robust Hand Pose Estimation ICCV 2023
***Qichen Fu**, Xingyu Liu, Ran Xu, Juan Carlos Niebles, Kris M. Kitani*

Domain Adaptive Hand Keypoint and Pixel Localization in the Wild ECCV 2022
*Takehiko Ohkawa, Yu-Jhe Li, **Qichen Fu**, Ryosuke Furuta, Kris M. Kitani, Yoichi Sato*

Sequential Voting with Relational Box Fields for Active Object Detection CVPR 2022
***Qichen Fu**, Xingyu Liu, Kris M. Kitani*

Ego4D: Around the World in 3,000 Hours of Egocentric Video CVPR 2022
*Kristen Grauman, ..., **Qichen Fu**, ..., Jitendra Malik*

A Self-Supervised Deep Model for Focal Stacking CLEO 2022
Weizhi Du, **Qichen Fu***, Zhengyu Huang*

EgoAugment: CMU-KLAB Submission to the EPIC-Kitchens Action Recognition 2021 Challenge EPIC @ CVPR 2021
*Xuhua Huang, Ye Yuan, Xingyu Liu, **Qichen Fu**, Kris M. Kitani*