CURRICULUM VITAE CHENYI KUANG

◆ Basic information

Email:	kuangc2@rpi.edu
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◆ Education

University of Science and Technology of China (2015-2019) **Hefei, China**

BS degree in Automation Department, School of Information Science and Technology

Rensselaer Polytechnic Institute (2019 - now) **Troy, NY, US**

Ph.D. student in Electrical, Computer and System Engineering

Advisor: Prof. Qiang Ji

Research Area: Computer Vision, Deep Learning

◆ Research projects

Human Facial Expression recognition & Analysis through 3D Face Modeling:

- learning personalized 3D face models from images/3D scans
- accurate 3D face reconstruction for joint analysis of 3D head poses and facial expressions (for single/multiple subjects)
- 3D facial action unit recognition through learning AU-aware 3D faces

Facial Action Unit Dataset Labeling:

We segment facial expression videos from BP4D+ and upload them to Amazon AMT website for online manual labeling. Then we collect worker annotation from the website to perform post-processing to generate frame-by-frame data labeling and analyze the accuracy of the labels.

3D Eye Modeling and Gaze Tracking:

- constructing deformable 3D eye model for representing the anatomical eyeball structure applicable to various subjects, including eye data collection from a wearable device, data processing for camera calibration, calculation of 3D eyeball parameters (pupil center, cornea center, eyeball center and fovea position), and 3D deformable eyeball basis construction.
- Model-based 3D eyeball reconstruction & gaze estimation by 3DMM-Face-Eye fitting.

◆ Internship

IBM summer intern, Almaden Lab **May 2022-Aug 2022**

Knowledge distillation for data free model fusion

◆ Academic services

Research Assistant **RPI ECSE, Fall 2019 – Summer 2021**

Project: Human facial behavior analysis (facial action unit recognition & 3D face reconstruction)

Teaching Assistant **Signals & Systems, RPI ECSE, Fall 2021 – Spring 2022**

Reviewer **GAZE2022 CVPR workshop**

◆ Publication

AU-aware 3D Face Reconstruction through Personalized AU-specific Blendshape Learning (ECCV2022)

Towards an accurate 3D deformable eye model for gaze estimation (ICPR2022 Workshop)

◆ Programming skills

Python (pytorch, tensorflow, scikit-learn); Matlab