Meng-Chen Lee

github.com/genius92606 genius92606.github.io linkedin.com/in/genius92606 martin33156gmail.com

EDUCATION

Ph.D. in Computer Science, University of Houston (UH) Aug. 2020 – May 2025 (expected)
- Cumulative GPA: 3.801/4.0
- Relevant courses taken: Computer Graphics, Machine Learning, Computer Vision, Natural Language Processing

B.S. in Biomedical Engineering, National Cheng Kung University (NCKU) Sept. 2015 – Aug. 2019
- Overall GPA: 3.45/4.3, Upper-division GPA: 3.65/4.3

SKILLS

Research: Multimodal, Computer Graphics, Deep Learning, NLP, Computer Vision

Programming Languages: C/C++, Python, MATLAB

Tools: Pytorch, Anaconda, OpenGL, Visual Studio, Vicon, Git, Blender, MotionBuilder

PUBLICATION

Lee, Meng-Chen, Trinh, May, & Deng, Zhigang. Multimodal Turn Analysis and Prediction for Multi-party Conversations. International Conference of Multimodal Interaction (ICMI) 2023.

EXPERIENCE

Research Assistant, Computer Graphics and Interactive Media Lab (CGIM), UH Aug. 2020 - Present

Multi-party Conversation Analysis
- Captured over 55 hours of multimodal three-party and more than 15 hours of four-party conversation datasets.
- Integrated multimodal inputs with cross-attention transformer and language model to predict end of turn and next speaker within conversations.

Dialogue Motion Generation
- Generate two-people conversation using diffusion model with VQVAE for motion latent representation and contrastive learning for semantic extraction.

Graduate Teaching Assistant, Department of Computer Science, UH Jan. 2021 - Present
- Database, Computer Graphics, and Data Structure.

Research Assistant, Medical Device Innovation Center, NCKU Jan. 2020 - Jun. 2020
- Created a user-friendly mobile app for epilepsy detection, enabling convenient access for patients and doctors.

Co-op, Brain Navi Biotechnology Co., Ltd. Sep. 2017 - Jan. 2018
- Built an advanced application utilizing depth camera technology to achieve real-time and accurate brain location and orientation tracking, ensuring seamless brain insertion surgeries.

Special Project Teacher, Tainan Bilingual International Education Association Mar. 2017 - Jun. 2017
- Developed an engaging programming course tailored for third-grade elementary school students, introduced fundamentals of coding through hands-on experience of controlling robots with *SNAP!*.

SELECTED PROJECTS

Face Detection in Large distance (FaDiLD) Jan. 2023 - May 2023
- Enhanced YOLOv8 with transformer layers, achieving detection accuracies of 93.74%, 91.63%, and 76.21% on WiderFace benchmarks.

Detecting Minimal Semantic Units and their Meanings (DiMSUM) Jan. 2023 - May 2023
- Finetuned BERT model for Multiword Expression (MWE) and Supersence prediction.

LEADERSHIPS

Primary Officer, Taiwanese Students Association at UH May. 2022 - May. 2023

Team Leader, IFMBE Student Design Competition at IUPESM Prague, Czech Republic Jun. 2018
- Led a team to build a telemedicine device for providing prenatal care in resource-scarce communities.

AWARDS

Best Paper Award - UH Computer Science PhD Research Showcase March. 2024