Zhifeng Gu

The Hong Kong Polytechnic University, Hong Kong

+852-67401587 | zhifeng.gu@connect.polyu.hk | Website

Education

The Hong Kong Polytechnic University, Hong Kong   Sep 2023 – Present
- Doctor of Philosophy, Advised by Prof. Bing Wang
- Research Interests: Multimodal Perception, Spatial Intelligence, Embodied AI

Beihang University, Beijing, China   Sep 2019 – Jun 2023
- Bachelor of Engineering, Software Engineering
- GPA: 3.78/4.0 (Top 10%)   TOEFL: 110   GRE: 325+3.5

Publications

MMOne: Representing Multiple Modalities in One Scene

Zhifeng Gu, Bing Wang

International Conference on Computer Vision (**ICCV 2025**)

Experience

Research on Multimodal Scene Representation   Sep 2024 – Mar 2025

SPACE Group, HK PolyU, Advised by Prof. Bing Wang
- "MMOne: Representing Multiple Modalities in One Scene" is accepted by ICCV 2025.
- We propose a general framework for representing multiple modalities in one scene. A modality modeling module and a multimodal decomposition mechanism are proposed to address modality conflicts.

Research on Scene Understanding and Reconstruction   Jul 2022 – Feb 2023

GAP Lab, CUHK-Shenzhen, Advised by Prof. Xiaoguang Han
- Use RGB videos of indoor scenes to estimate object 3D bounding boxes and reconstruct object mesh in real time.
- GRU and attention module are utilized to better capture temporal relationship to improve reconstruction quality. Octree is adopted to speed up reconstruction process.

Research on Object Pose Estimation and Tracking   Jun 2022 – Jun 2023

VCG Lab, Beihang University, Advised by Prof. Lu Sheng
- Focus on human-object interaction scenes, where existing methods perform badly due to hand occlusion.
- Adopt a motion-centric paradigm, where we explicitly model the object motion between successive frames and refine poses through shape completion and attention mechanism using previous frames.

Selected Honors and Awards

- Outstanding Graduate Award, 2023

Selected Skills

- Python, PyTorch, C/C++, Java, etc.