Zhanpeng LUO

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Education

- **University of Pittsburgh**   **Pittsburgh,** Aug 2024 –
  Major: Computer Science
  GPA major: 4.0   **GPA overall:** 3.95
  Core Course: Computer Graphics: 100; Math Foundation for Machine Learning: 100
- **Sichuan University**   **Chengdu,** 09.22-06.24
  Major: Computer Science
  GPA major: 3.93   **GPA overall**: 3.92

Internship

- **25 Summer Robotics Institute Summer Scholar**   **Pittsburgh,** June 25–Aug25
  Work on video understanding for long, causal relationship and for visual language model
  Supervised by Katia Sycara
- **24 Summer Human Sensing Lab**   **Pittsburgh,** June 24–Aug24
  Work on extending the scene in a arbitrary scale for gaussian splatting,
  Supervised by Bernhard Kerbl
- **23 Summer West China Hospital Big Data Center**   **Chengdu,** June 23–Aug23
  Work on building better medical segmentation with topological data analysis

Current Project

- **Streamline the Optimization of Gaussian Splatting**   **Pittsburgh,** Aug 2024
  Here is a short demonstration to show how our pipeline work.
  Observing the optimization behavior in the early stage of gaussian splatting, we aim to address some key challenges, making the optimization simple yet effect. Furthermore, we hope to extend gaussian splatting on an arbitrary large scenario. This project is supervised by Dr. Bernhard Kerbl.
- **Reconstruct casual video in minutes level.**   **Pittsburgh,** Jan 2025
  Great inspired by current advance in deep visual SLAM model and gaussian splatting. Even the calibration is not accurate enough as COLMAP, they are robust enough as an initialization. With carefully designed strategy, we could divide the dynamic foreground and static background. And keep the size of background grow slowly even for 1 minute casual video! I work on this project with Haoxi Ran.

Publication & Patent

- **Arxiv**
  Zhanpeng Luo, Linna Wang, Guangwu Qian, Li Lu**. "**Imagine with the Teacher: Complete Shape in a Multi-View Distillation Way"
- **IEEE BIBM 2023**
  Linna Wang, Leyi Zhao, **Zhanpeng Luo**, Xuan Wang, Ziliang Feng, and Li Lu "CARE-30: A Causally Driven Multi-Modal Model for Enhanced 30-Day ICU Readmission Predictions"
- **IEEE BIBM 2023**
  Changjing Song, **Zhanpeng Luo**, Li Lu, and Qian Su " MLNet: Enhancing Joint Predictive Modeling of Chronic Diseases Using Deep Learning"

China Utility Patent Lixian Zhu, **Zhanpeng Luo** "A Practical Circuit for Effectively Reducing No-Load Power Consumption"

Skill Bag

High-Performance graphics: CUDA programming, Gaussian Splatting
Math & Code for graphics & geometry: Exterior calculus, Conformal parametrization, PDE build & solve with Eigen
Language: Toefl: Reading 30, Listening 28, Speaking 24, Writing 25