

Weijie Lyu

✉ wlyu3@ucmerced.edu | 🏠 <https://weijielyu.github.io> | 🌐 weijielyu | 🎓 Google Scholar

Summary

Third-year Ph.D. candidate at UC Merced working on computer vision, with current research focus on **video generation** and **3D/4D reconstruction**. Published first-author papers in top-tier CV venues including CVPR, ICCV, ECCV, etc. Industry experience at Apple, Adobe Research and ByteDance.

Education

University of California, Merced, *Ph.D. in EECS* *Aug. 2023 – Present*
Advisor: **Prof. Ming-Hsuan Yang**

University of Illinois, Urbana-Champaign, *M.S. in Computer Science* *Aug. 2021 – May 2023*
Advisor: **Prof. Derek Hoiem**
Thesis: *MACON: Memory-Augmented Continual Learning for Open-world Classification.*

ShanghaiTech University, *B.E. in Computer Science and Technology* *Sep. 2017 – Jul. 2021*
Senior Thesis Advisor: **Prof. Zhihao Jiang**
Thesis: *Intelligent Driving Verification Platform Based on Virtual Traffic Conditions.*
Award: Outstanding Graduate of Shanghai, Outstanding Graduate of ShanghaiTech University

University of California, Berkeley, *Visiting Student in EECS* *Aug. 2019 – May 2020*
Undergraduate Research Advisor: **Prof. Sonia Bishop.**

Research Experience

Apple, Cupertino, CA *May 2026 – Present*
- **Research Scientist Intern.** Advisor: **Dr. Lu Jiang** and **Dr. Jianyi Wang.**
- Working agentic video generation.

ByteDance, San Jose, CA *Feb. 2026 – May 2026*
- **Research Scientist Intern.** Advisor: **Dr. Yujing Wang** and **Dr. Xiangtai Li.**
- Working on micro drama video generation and video refinement.

Adobe Research, San Jose, CA *May 2024 – Jan. 2026*
- **Research Scientist/Engineer Intern.** Advisor: **Dr. Zhixin Shu.**
- Developed FaceCam, a portrait video camera control framework without scale ambiguity ([1]), and FaceLift, a framework for high-fidelity 3D head reconstruction ([4]).

Publications

* denotes equal contribution. Full publication list: **Personal Page** / **Google Scholar**.

- [1] **Weijie Lyu**, Ming-Hsuan Yang, and Zhixin Shu. FaceCam: Portrait Video Camera Control via Scale-Aware Conditioning. In *CVPR*, 2026. **Project Page**.

- [2] **Weijie Lyu**, Xueting Li, Abhijit Kundu, Yi-Hsuan Tsai, and Ming-Hsuan Yang. Gaga: Group Any Gaussians via 3D-aware Memory Bank. In *TMLR*, 2026. **Project Page**.
- [3] Jiageng Liu*, **Weijie Lyu***, Xueting Li, Yejie Guo, and Ming-Hsuan Yang. Edit3r: Instant 3D Scene Editing from Sparse Unposed Images. In *ECCV*, 2026. **Project Page**.
- [4] **Weijie Lyu**, Yi Zhou, Ming-Hsuan Yang, and Zhixin Shu. FaceLift: Learning Generalizable Single Image 3D Face Reconstruction from Synthetic Heads. In *ICCV*, 2025. **Project Page**.
- [5] Junqi You, Chieh Hubert Lin, **Weijie Lyu**, Zhengbo Zhang, and Ming-Hsuan Yang. InstaInpaint: Instant 3D-Scene Inpainting with Masked Large Reconstruction Model. In *NeurIPS*, 2025. **Project Page**.
- [6] Xiaoyuan Wang, Yizhou Zhao, Botao Ye, Xiaojun Shan, **Weijie Lyu**, Lu Qi, Kelvin C.K. Chan, Yinxiao Li, and Ming-Hsuan Yang. HoliGS: Holistic Gaussian Splatting for Embodied View Synthesis. In *NeurIPS*, 2025.
- [7] Kuan-Chih Huang, **Weijie Lyu**, Ming-Hsuan Yang, and Yi-Hsuan Tsai. PTT: Point-Trajectory Transformer for Efficient Temporal 3D Object Detection. In *CVPR*, 2024. **Project Page**.
- [8] Zhen Zhu*, **Weijie Lyu***, Yao Xiao, and Derek Hoiem. Continual Learning in Open-vocabulary Classification with Complementary Memory Systems. In *TMLR*, 2024. **Project Page**.
- [9] Zhen Zhu, Yijun Li, **Weijie Lyu**, Krishna Kumar Singh, Zhixin Shu, Sören Pirk, and Derek Hoiem. Consistent Multimodal Generation via A Unified GAN Framework. In *WACV*, 2024.
- [10] Chejian Xu*, Wenhao Ding*, **Weijie Lyu**, Zuxin Liu, Shuai Wang, Yihan He, Hanjiang Hu, Ding Zhao, and Bo Li. SafeBench: A Benchmarking Platform for Safety Evaluation of Autonomous Vehicles. In *NeurIPS*, 2022. **Project Page**.
- [11] Xianglong Tan, **Weijie Lyu**, and Andre Rosendo. CircuitBot: Learning to Survive with Robotic Circuit Drawing. In *PLOS ONE*, 2022.

Academic Service

Conference Reviewer: CVPR, ICCV, ECCV, ICLR, NeurIPS, ACM MM, ACM SIGGRAPH, etc.
Journal Reviewer: IEEE TPAMI, TMLR, ACM TOG, etc.