

Baicheng Wu

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Education

Ohio State University, BS in **Computer Science** with **Honors** Research Distinction Sep 2022 – Dec 2025

- GPA: **3.896/4.0** | Dean's List (All Semesters)
- **Coursework:** **Computer Vision, Artificial Intelligence**, Computer Networks, Database Systems, Operating Systems, Web Applications, Programming Languages, Computer Organization, Data Structures and Algorithms
- **Research Interests:** **3D Vision, Video Understanding**, Computational Imaging, Interpretable Perception

Research Experience

Research Assistant, MLB Computer Vision Lab – Ohio State University Aug 2024 – Dec 2025

Advisor: Prof. Wei-lun (Harry) Chao

- Built a large-scale, multi-condition **stereo vision dataset** and benchmarking suite to evaluate model robustness under real-world sensing variability
- Designed a unified evaluation protocol comparing appearance-based and action-based identification models to analyze cross-modal generalization on **video understanding**
- Led the design of controlled **video datasets** and **interpretability pipelines**, resulting in a co-first-author manuscript under review at **CVPR 2026**.

Technician, Buckeye Autodrive – Ohio State University Jan 2025 – Aug 2025

- Developed an integrated **camera–LiDAR calibration** toolbox that streamlined extrinsic calibration and improved **3D point-cloud** projection accuracy
- Implemented a unified training framework supporting multiple **object detection architectures** (YOLO, Faster R-CNN), enabling standardized experimentation and reproducible evaluation
- Designed and automated a **data processing pipeline** for synchronized point cloud and image collection, improving dataset generation efficiency

Publications

Probing Identity-Specific Motion Signatures: A Controlled Diagnostic Study

Yingtie Lei*, **Baicheng Wu***, Fangxun Liu*, Colin Lee, Ziheng Zhang, Junke Yang, Zhiyuan Tao, Xuyan Huang, Shuheng Wang, William Koran, Kyle Park, Elijah H. Buckwalter, Cheng Hsuan Chiang, Tejas Naik, Daniel Yi, Wei-Lun Chao

Under review at WACV 2027

** indicates equal contribution*

Projects

Stereo Depth Reconstruction & Benchmarking Pipeline Jan 2025 – Aug 2025

- Developed a complete **stereo reconstruction pipeline** including rectification, disparity estimation, depth generation, and quality-control modules.
- Implemented **ROS2-based** hardware synchronization for multi-sensor capture.
- Designed a pipeline to evaluate **RAFT-Stereo, STTR**, and **PSMNet** under diverse lighting and outdoor conditions.
- Produced standardized **benchmarking protocols** that were later adopted in lab research.

Skills

Deep Learning: PyTorch, TorchVision, CUDA, distributed training (Slurm/GPU clusters), TensorBoard, WandB;

3D Vision & Video Recognition: OpenCV, LiDAR–Camera Calibration, RAFTStereo, STTR, MViT, TimeSformer;

Data & Scientific Computing: NumPy, Pandas, Matplotlib, SciPy;

Systems & Tools: Linux, Slurm, tmux, Docker, Git, Conda;