Bingqian Wu

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Education

Northwestern Polytechnical University 2022 – 2026

BS in Information Security

Westlake University & Shanghai Innovation Institute 2026 – 2031

PhD in Artificial Intelligence

Research Experience

ASGO Lab, Northwestern Polytechnical University Oct. 2023 – Oct. 2025

Research Intern Advisor: Jiaqi Yang

- Conducted a full-cycle first-author research project on LiDAR-based 3D object detection for autonomous driving, including independent literature review, problem formulation, solution design, code and data engineering, iterative experimental analysis, and paper writing, submission, and revision. Proposed a Mixture-of-Experts (MoE) framework to address proposal distribution discrepancy in two-stage 3D detectors. The work was submitted to Image and Vision Computing (IVC), with open-source implementation released at: `https://github.com/12e21/RefineMoE`

SIG Lab, Westlake University Oct. 2025 – Present

Visiting Student Advisor: Xiangru Huang

- Collaborated on an active 3D reconstruction project submitted to CVPR 2026, where I conducted the validation and ablation studies of the Depth Uncertainty Quantification (UQ) model. In parallel, initiated independent research on world models based on controllable video generation, reproducing and extending representative works in video-based world modeling, VLA for robotic manipulators, as well as 3D/4D reconstruction and generative models. Built and maintained the corresponding codebases and datasets to support large-scale experimentation across simulation and real-world settings

Engineer Experience

UAV-based Autonomous Parcel Delivery Mar 2023 – Jun 2023

Developed a fully autonomous multi-stop takeoff, landing, navigation, and delivery system using a self-assembled UAV. Implemented autonomous flight, path planning, and obstacle avoidance based on ROS, significantly enhancing operational capabilities in complex environments.

Multi-UAV Simulated Target Tracking Jul 2023 – Oct 2023

Coordinated 6 UAVs in a simulated environment to collaboratively track and report the position of a moving pedestrian. Designed and implemented an efficient multi-UAV cooperative control architecture and integrated the YOLOv8 model to optimize real-time tracking performance.

Honors

National First Prize, 25th China Robot and Artificial Intelligence Competition Jun 2023
National Second Prize, 2023 China Robotics Competition and RoboCup China Open Oct 2023
National Second Prize, 2024 China Robotics Competition and RoboCup China Open May 2024
National First Prize, 26th China Robot and Artificial Intelligence Competition Aug 2024
National First Prize, 2024 National Robotics Championship Dec 2024

吴秉谦

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教育背景

西北工业大学 2022 – 2026

信息安全 本科

西湖大学 & 上海创智学院 2026 – 2031

人工智能 博士

科研经历

ASGO 实验室，西北工业大学 2023.10 – 2025.10

科研实习生 导师：杨佳琪

- 独立完成自动驾驶场景下基于激光雷达的三维目标检测方向的一作科研工作，覆盖完整科研流程，包括文献调研、问题定义、方法设计、代码与数据工程实现、迭代实验分析、论文撰写、投稿与修改。提出基于 Mixture-of-Experts (MoE) 的两阶段检测器提案分布差异性建模方法，论文投稿至 Image and Vision Computing (IVC)，并开源代码：`https://github.com/12e21/RefineMoE`

SIG 实验室，西湖大学 2025.10 – 至今

访问学生 导师：黄相如

- 参与一项主动式三维重建课题（投稿至 CVPR 2026），负责深度不确定性量化（Depth UQ）模型的验证与消融实验。同时开展 4D 世界模型方向的自主科研课题，围绕可控视频生成式世界模型、仿真与实物环境下的机械臂 VLA 系统，以及 3D/4D 重建与生成模型，复现并拓展相关代表性工作，并搭建配套的代码库与实验数据集以支持大规模实验。

工程经历

基于无人机的自主快递投送系统 2023.03 – 2023.06

基于自组装无人机平台，开发完整的多站点自主起降、导航与投送系统。基于 ROS 实现自主飞行控制、路径规划与避障功能，显著提升复杂环境下的自主作业能力。

多无人机协同目标跟踪系统 2023.07 – 2023.10

在仿真环境下协同控制 6 架无人机完成对行人移动目标的协作跟踪与位置回传，设计并实现高效的多无人机协同控制架构，并融合 YOLOv8 模型以优化实时目标跟踪性能。

荣誉奖励

国家级一等奖，第二十五届中国机器人及人工智能大赛 2023.06

国家级二等奖，2023 年中国机器人大赛暨 RoboCup 中国赛 2023.10

国家级二等奖，2024 年中国机器人大赛暨 RoboCup 中国赛 2024.05

国家级一等奖，第二十六届中国机器人及人工智能大赛 2024.08

国家级一等奖，2024 年全国机器人锦标赛 2024.12