Sihan Qin

Email | LinkedIn | Google Scholar | GitHub | Homepage | Guangzhou, P.R. China

EDUCATION

Sun Yat-sen University Guangzhou, China
Major in Computer Science and Technology (Artificial Intelligence & Big Data), Average Score: 88/100 Jun 2027(Expected)

- **Core Courses:** Machine Learning & Data Mining, Artificial Intelligence, Principles of Database Systems, Modern Control Systems, Optimization Theory, Computer Graphics, Digital Image Processing, Computer Networks
- **Awards:** 3rd-Class University Scholarship (2023, 2024); Honorable Mention, Mathematical Contest in Modeling 2025

RESEARCH PROJECTS

HCP Lab, Sun Yat-sen University Guangzhou, China
Advised by Prof. Guangrun Wang, Liang Lin, project on github Jul 2025 – Mar 2026

- Proposed and developed a physical autoregressive model that transfers physical priors from video pretraining to robotic manipulation, enabling video-consistent action generation without action pretraining.
- Conducted training and evaluation on ManiSkill, LIBERO, and CALVIN; tuned key hyperparameters including batch size, learning rate, and LR scheduler, improving simulation success rates from about 30% to over 90%.
- Conducted real-robot experiments on a Franka Panda arm and collected 80 teleoperated trajectories for supervised learning, improving model generalization and real-world robustness; also contributed to paper writing.

Institute of Artificial Intelligence and Unmanned Systems, Sun Yat-sen University Guangzhou, China
Procedural 3D Image Generation from Lung CT Scans May 2024 – Sep 2024

- Curated 20 full respiratory-cycle lung CT samples from public datasets and performed threshold segmentation, meshing, and point cloud conversion with scikit-image and Open3D.
- Separated bronchi and lung boundaries using RANSAC, curvature clustering, Alpha Shape, and voxel filtering to support downstream lesion analysis.

Mathematical Contest in Modeling 2025 Guangzhou, China
Olympic Medal Table Prediction, Honorable Mention Feb 2025

- Built regression, random forest, and SVM models, combined with SMOTE, Bayesian optimization, and Monte Carlo simulation, to predict medal counts and analyze key influencing factors.

PUBLICATION

Zijian Song, **Sihan Qin**, Tianshui Chen, Liang Lin, Guangrun Wang, *Physical Autoregressive Model for Robotic Manipulation without Action Pretraining*, arXiv:2508.09822.

Zijian Song, Qichang Li, **Sihan Qin**, Yuhao Chen, Tianshui Chen, Liang Lin, Guangrun Wang, *Learning Physics from Pretrained Video Models: A Multimodal Continuous and Sequential World Interaction Models for Robotic Manipulation*, arXiv:2603.00110, icmr 2026.

PROJECTS

Zotero Paper Partner

- An attention-friendly Zotero plugin that answers Q: questions inside native notes.
- Project Homepage

INTERNSHIP EXPERIENCE

Guangzhou Shuzhi Technology Guangzhou, China
Algorithm Intern Sept 2025 – Oct 2025

- Contributed to prompt engineering for an academic–industry matching platform.
- Diagnosed key flaws in legacy AI interactions and implemented a prompt framework combining UltraRAG + Deep Research with multi-round retrieval-LLM for deep analysis of project value, team structure, and research outcomes.
- Structured 5 key LLM-generated analytical results into JSON and stored in databases to support front-end development.

CAMPUS LEADERSHIP

Sun Yat-sen University Student Union & School of Computer Science Student Union Sept 2023 – July 2024
General Affairs Department Member; "Red Kapok" Event Coordinator

SKILLS

Languages: Mandarin (Native), Cantonese (Fluent), English (Fluent), French (Basic)
Technical: Machine Learning, Deep Learning, Robotics, PyTorch, Python, C++, C, SQL, Linux, Franka