

CUNXIN FAN

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EDUCATION

Bachelor of Information Engineering, Bachelor of French
Shanghai Jiao Tong University

Graduating June 2026

GPA: 4.02/4.30 (92.5/100); Ranked 2/55 (1/86 in first year)

SJTU-ParisTech Elite Institute of Technology

Relevant coursework: Artificial Intelligence Mathematical Basis, Optimization Theory, Neural Networks

TECHNICAL SKILLS

Tools: T_EX, Typst, MATLAB, Git, ROS

Programming: Python, C++, Java, JavaScript, C#

Languages: English, Mandarin, French

AWARDS AND HONORS

Academic Honors

- **National Scholarship**, Rank **1st** in college, Top **0.2%** national-wide 2023
- **National Scholarship**, Rank **1st** in college, Top **0.2%** national-wide 2024

Mathematical Modeling

- **Outstanding Winner and SIAM Award**, Team 2425792, Mathematical Contest in Modeling 2024

Competitive Programming

- **Silver**, Asia-Pacific Informatics Olympiad (China) 2020
- **Silver**, Shanghai-China Collegiate Programming Contest 2022
- **First Prize and Top 3%**, National Olympiad in Informatics in Provinces, Shanghai 2019 – 2020
- **Platinum Division**, USA Computing Olympiad 2020

Robotics

- **Champion**, Team Jiao Loong, RoboMaster University Championship, hosted by DJI 2023
Served as project leader of Robot Radar
- **Division Finalist**, Team 8825A, VEX Robotics Competition World Championship 2018
Served as chief programmer
- **Excellence Award**, Team 8825A, VEX Robotics Competition Asia Open 2017
Served as chief programmer

PUBLICATIONS

Interleave-VLA: Enhancing Robot Manipulation with Image-Text Interleaved Instructions

Cunxin Fan*, Xiaosong Jia*, Yihang Sun, Yixiao Wang, Jianglan Wei, Ziyang Gong, Xiangyu Zhao, Masayoshi Tomizuka, Xue Yang, Junchi Yan, Mingyu Ding

ICRA 2025 Workshop Safe-VLM (Spotlight), Under review at ICLR 2025

[Paper]

WOMD-Reasoning: A Large-Scale Dataset for Interaction Reasoning in Driving

Yiheng Li*, Cunxin Fan*, Chongjian Ge, Zhihao Zhao, Chenran Li, Chenfeng Xu, Huaxiu Yao, Masayoshi Tomizuka, Bolei Zhou, Chen Tang, Mingyu Ding, Wei Zhan

ICML 2025

[Paper]

Learning Cryptographic Problems via ANF-based SAT Instance Representation

Xinhao Zheng, Yang Li, Cunxin Fan, Huaijin Wu, Xinhao Song, Junchi Yan

NeurIPS 2024

[Paper]

RESEARCH

Interleave-VLA: Enhancing Robot Manipulation with Image-Text Interleaved Instructions Dec 2024 - April 2025

- Improved zero-shot generalization of state-of-the-art VLAs (OpenVLA and π_0) in simulation and real-world settings via multimodal training with interleaved image-text instructions.
- Developed a pipeline for generating interleaved image-text instruction data and extended SIMPLER-ENV's instruction interface.

WOMD-Reasoning: A Large-Scale Dataset for Interaction Reasoning in Driving

Jul 2024 - Dec 2024

- Developed a motion-language model combining LLMs and motion prediction, demonstrating its language output enhances motion prediction tasks.
- Explored the application of CoT and DPO from vision-language model practices to motion-language models.

Learning Cryptographic Problems via ANF-based SAT Instance Representation

Apr 2024 - Jun 2024

- Enhanced Neuro-SAT with GNNs for Algebraic Normal Form SAT problems.
- Validated the approach on cryptographic challenges like Simon, Speck, and SR.

PROJECTS

Robomaster Engineering, Computer Vision Division

Oct 2022 – May 2024

- As leader of project radar, developed a localization system in solving front-view Lidar-Camera fusion perception in order to localize all the robots seen.
- Participated in development of an autonomous navigation robot, engineered and maintained an autonomous decision-making, localization, and navigation system with ROS.
- Participated in development of a quadcopter, engineered and maintained an aerial VIO-based localization as well as an auto-aim system.

Please refer to [blog](#) for details.

An Interactive VR Video Game using Motion Capture and Unity

Mar 2023 - Jul 2023

- Developed a VR game featuring real-time motion capture, photorealistic 3D environments using Gaussian splatting, and an LLM-powered dialogue system.

A College New Year Gala Lottery Platform Website

Nov 2023 - Dec 2023

- Developed a lottery website utilizing Vue3 for frontend, Spring Boot for backend and Mybatis for DAO.
- Incorporated SJTU account login and user avatar images; Implemented real-time bullet screen using WebSocket.