

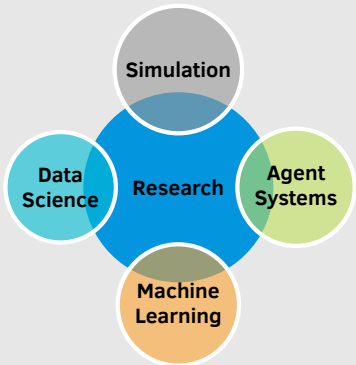
SHUAI PAN

ECE & CS Student

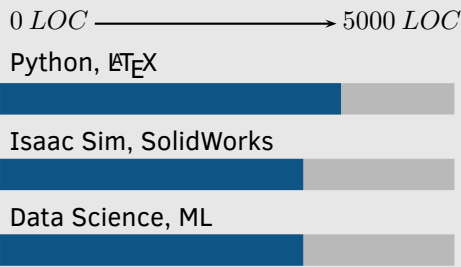
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Technical Skills — Overview



Programming



Education

Shanghai Jiao Tong University (SJTU), Shanghai, China Sep. 2024 – Jun. 2028
Electrical and Computer Engineering; GPA: 3.73/4.00. Main courses include Advanced Math, Discrete Mathematics, Probability and Statistics, Introduction to Computer Science, Academic Writing, and General Chemistry.

University of Michigan, College of Engineering, Ann Arbor, MI, USA Aug. 2026 – May 2028
Computer Science BSE (Dual Degree Program). Admitted to the Computer Science BSE class entering Fall 2026.

Oxford University Prospect Program, Oxford, UK Jul. 2024 – Aug. 2024
New Frontiers of Science: Math, Physics, Computer Science and Engineering; GPA: A-.

UCLA Extension, Online Jun. 2024 – Sep. 2024
Introduction to Data Science (Code: 397990); GPA: 4.0/4.0.

Academic Experience

Jun. 2024 – **Modeling and Optimization of Manufacturing Systems Based on Virtual Simulation** Shanghai, China

May 2025 *The 46th SJTU Participation in Research Program*

- Modeled and virtually simulated an automated production line environment using Isaac Sim and SolidWorks.
- Analyzed impacts of key parameters, including AGV path planning, robotic arm control, and storage capacity, on production line efficiency and costs.
- Explored virtual simulation’s potential for automated manufacturing optimization, including intelligent scheduling, production forecasting, and deep reinforcement learning.

Jun. 2024 – **Waterborne Amphibious Model Car** Shanghai, China
Sep. 2024 *The 18th iCAN International Contest of Innovation*

- Implemented the driving control module for the amphibious model vehicle.
- Assembled and equipped the solar cells for the model vehicle.
- Enhanced the water-resistance capabilities of the model vehicle.
- Won the 3rd Prize in the contest.

Publications

2024

A Low Overhead Positioning Framework for Satellite-Based IoT Devices MSN

2024

Jiale Lei, **Shuai Pan**, Linghe Kong, Guihai Chen, Jiaying Song

- Published in *2024 20th International Conference on Mobility, Sensing and Networking (MSN)*, pp. 188–195. DOI: 10.1109/MSN63567.2024.00035.
- Introduces a low-overhead positioning framework for satellite-based IoT devices, targeting practical location estimation for resource-constrained IoT terminals in satellite communication scenarios.
- Link: IEEE Computer Society.

2026

Synergy: A Next-Generation General-Purpose Agent for Open Agentic Web arXiv

Xiaohang Nie, Zihan Guo, Kezhuo Yang, Zhichong Zheng, Bochen Ge, **Shuai Pan**, Zeyi Chen, Youling Xiang, Yu Zhang, Weiwen Liu, Yuanjian Zhou, Weinan Zhang

- Presents Synergy, a general-purpose agent architecture and runtime harness for persistent, collaborative, and evolving agents on the Open Agentic Web.
- The system grounds collaboration in session-native orchestration, repository-backed workspaces, and social communication, while supporting identity through typed memory, notes, agendas, skills, and persistent social relationships.
- arXiv: 2603.28428; Project page: synergy.holosai.io.

2026

SkillMAS: Skill Co-Evolution with LLM-based Multi-Agent System arXiv

Shuai Pan, Yixiang Liu, Jiaye Gao, Te Gao, Weiwen Liu, Jianghao Lin, Zhihui Fu, Jun Wang, Weinan Zhang, Yong Yu

- Presents a non-parametric adaptive specialization framework that couples skill evolution with multi-agent system restructuring after deployment.
- Uses verified execution traces for utility learning, bounded skill updates, and evidence-gated MAS restructuring across embodied manipulation, command-line execution, and retail workflows.
- arXiv: 2605.09341.

Extracurricular Activities

May 2025 – **Director of the Competition Department** Global College, STJU
May 2026 *Student Science and Technology Innovation & Competition Department*

- Organized and hosted technical lectures, workshops, and competitions in innovation, mechanics, and mathematical modeling.
- Collected and published information about technical and academic competitions and challenges nationwide and worldwide.
- Served as lead instructor for a Deep Learning workshop focused on transformer architecture and attention mechanisms.
- Gave lectures on Python coding skills and LaTeX.

Sep. 2023 – **Volunteer** Suzhou, China
Present *Cyrus Tang Volunteer Club*

- Served as graphic editor for the club's social media accounts.

Awards & Honors

Aug. 2024 3rd Prize, The 18th iCAN International Contest of Innovation
Dec. 2022 1st Prize, The 36th Chinese National Chemistry Olympiad

Hobbies

Guitar, Piano, Basketball, Running