ZHENXIANG JIANG

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AI & Computer Vision Researcher/Engineer with 3+ years of experience in deep learning R&D and deployment. Author of papers at AAAI, CVPR and ACM conferences. Skilled in a wide range of AI and development technical stacks. U.S. Permanent Resident, available immediately for full-time roles nationwide in the U.S.

PROFESSIONAL EXPERIENCE

Learning and Vision Lab, ECE Dept., National University of Singapore

Singapore

Research Assistant, Supervisor: Prof. Xinchao Wang

August 2023-February 2025

- Completed a diverse range of computer vision tasks, from low-level image processing to high-level scene understanding, enhancing the lab's research capabilities.
- Co-led a high-resolution non-homogeneous dehazing project that ranked 4th out of 100+ result submissions, with the project report published in CVPR Workshop 2023.
- Played a key role in a long-term XAI project in collaboration with Singapore's largest national defense R&D organization, focusing on the interpretation and explainability of detection and classification models; successfully delivered two phases of product development.
- Contributed significantly to two cutting-edge research projects—GFlow and C4D—focused on 4D dynamic scene reconstruction and understanding. In these projects, I designed and developed key modules, camera—world coordinate conversion, interactive 3D/4D visualization, and downstream tasks and evaluation metrics, which led to the publication of two high-quality papers (AAAI 2025 and arXiv).

Temasek Laboratories, National University of Singapore

Singapore

Research Assistant, Supervisor: Dr. Sunan Huang

September 2023-April 2024

- Led the research and development of a high-frequency drone detection module, enhancing the onboard drone tracking system's accuracy and reliability.
- Created a fully labelled event camera drone detection dataset by integrating three fully or semi-labelled drone detection frame datasets with one unlabelled lab-collected event dataset, facilitating more accurate drone detection in research projects.

Machine Intelligence Lab, College of Computer Science, Sichuan University

Chengdu, China

Research Assistant, Supervisor: Prof. Yuanyuan Chen

March 2022-June 2023

- Initiated and conducted research on facial expression recognition under face mask occlusion; developed a seven-class facial expression recognition dataset and published the findings at ACM ICCAI 2023, where the work received the Best Presentation Award.
- Led research on weakly supervised 3D human pose estimation, developing a state-of-the-art network (WS-GCN) that integrates 2D-to-3D conversion, non-local structures, bone length constraints, and weak supervision with a robust GCN framework, resulting in a publication at ACM ICCAI 2024.

Chengdu Yinlaiyinwang (Convenient Printing) Technology Co., LTD

Chengdu, China

Founder, CEO

November 2020-July 2022

- Led a team of 10 and successfully developed an intelligent online printing system called Yinlaiyinwang, transforming traditional offline printers into internet-connected smart devices.
- Established an on-campus experience store that served over 100,000 students and offered more than 15 part-time job opportunities in campus.
- Earned multiple entrepreneurship awards at both the college and university levels.

EDUCATION

National University of Singapore (Top 1 in Singapore, QS World Rank 8)

Singapore

Master of Science in Computer Engineering,

Specialization: Machine Intelligence and Application | GPA: 4.69/5.00

August 2023–January 2025

Sichuan University (Top 15 in China)

Chengdu, China

Bachelor of Engineering in Artificial Intelligence | GPA: 3.80/4.00

Top Graduate of Sichuan Province (Top 4%) | Graduated as Valedictorian

September 2019–June 2023

SELECTED PROJECTS

Recommendation Site for Stock Investment based on LSTM

Singapore

Team Leader, NUS School of Computing Summer Workshop 2022

May 2022-July 2022

• Used LSTM for online training and predicting the price of each stock, utilized Vue to visualize on the website and interact with the user, and scored an A in AI/ML for the Workshop Financial Service Track.

Face Recognition System against Poisoning Attacks

Chengdu, China

Student Innovation and Entrepreneurship Training Program, Sichuan University

September 2020-July 2021

• Designed a defense mechanism using Deep K-NN to detect and filter poisoned samples during training, enhancing the robustness of face recognition systems against adversarial data injection.

3D Human Whole Body Rehabilitation Assessment System Based on OpenPose

Chengdu, China

Student Innovation and Entrepreneurship Training Program, Sichuan University

September 2020-July 2021

• Developed a remote rehabilitation assessment system using OpenPose and deep learning to evaluate patients' movements via video, enabling accessible at-home physical therapy monitored by clinicians.

SKILLS

- **Programming Languages**: Python (Advanced), SQL (Advanced), C++ (Proficient), Matlab (Proficient), CudaC (Proficient), Java (Intermediate), Shell Scripting (Intermediate)
- **Libraries & Frameworks**: PyTorch (Advanced), NumPy (Advanced), Pandas (Advanced), Matplotlib (Proficient), Scikit-Learn (Proficient), OpenCV (Proficient), TensorBoard (Familiar), LaTeX (Familiar)
- **Tools & Platforms**: Linux (Advanced), MySQL (Advanced), Git (Advanced), Docker (Proficient), FastAPI (Proficient), Nginx (Familiar), Vue (Familiar), GitHub Actions (Familiar)
- Languages: English (Fluent), Mandarin Chinese (Native)

PUBLICATIONS

- Wang, S., **Jiang, Z.**, Yang, X., & Wang, X. (2025). C4D: 4D Made from 3D through Dual Correspondences. (ICCV 2025 Submitted)
- Wang, S., Yang, X., Shen, Q., **Jiang, Z.**, & Wang, X. (2024). GFlow: Recovering 4D World from Monocular Video. arXiv preprint arXiv:2405.18426. (AAAI 2025 Poster Presentation)
- **Jiang, Z.**, Chen, Y. (2024, April). WS-GCN: Integrating GCN with Weak Supervision for Enhanced 3D Human Pose Estimation. In Proceedings of the 2024 10th International Conference on Computing and Artificial Intelligence (pp. 6-13).
- Ancuti, C. O., Ancuti, C., Vasluianu, F., ..., Wu, Y., **Jiang, Z.**, Liu, S., Yang, X., Jing, Y., ... & Busch, C. (2023). NTIRE 2023 HR nonhomogeneous dehazing challenge report. In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (pp. 1808-1825).
- **Jiang, Z.** (2023, March). A Novel Seven-Class Facial Expression Recognition Method With Face Mask. In Proceedings of the 2023 9th International Conference on Computing and Artificial Intelligence (pp. 178-184).