Rui Wang

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Education Profile

University of Michigan, Ann Arbor   **Aug 2025 - Present**
- Master of Science in Information, major in Data Analysis, with GPA 4.000/4.000

Shanghai Jiao Tong University - Global College Institute   **Sept 2022 - Present**
- Major in Electrical and Computer Engineering and Minor in Computer Science, with GPA 3.641/4.000

Cornell University   **Jan - May 2025**
- Exchange program at College of Engineering, with GPA 3.850/4.000

Work & Leadership Experience

OpenAGI Research Foundation, Inc.   **Jan - Aug 2025**
Software Engineer Intern (Agent Tooling)   United States (Remote)
- Achieved **state-of-the-art success rate of 83.6** on Online-Mind2Web, significantly outperforming Gemini CUA (69.0), OpenAI Operator (61.3), and Claude Sonnet (61.0).
- Engineered Python-based tooling to capture user operations and applied computer-vision methods to reproduce end-to-end workflows for training and evaluation.
- Generated operation datasets on OSWorld for terminal and Office tasks, improving data diversity.
- Paper: *OSGym: Super-Scalable Distributed Data Engine for Generalizable Computer Agents* (arXiv:2511.11672).

Salesforce, Inc.   **Aug - Dec 2025**
Data Analyst Intern   United States (Remote)
- Performed **statistical analysis** on survey data to isolate key factors associated with high-risk AI usage patterns.
- Built a **risk quantification pipeline**, transforming unstructured user feedback into structured risk metrics.
- Visualized usage data with **Tableau**, translating complex data patterns into strategic insights.

Shanghai Baosight Software Co., Ltd.   **Aug - Sep 2024**
Machine Learning Intern   Shanghai, China (On-site)
- Developed short-term metro passenger-flow surge prediction models using **XGBoost** across **523 stations**, achieving **86% accuracy** to support proactive crowd management.
- Engineered complex **time-series features** and optimized model performance based on **ROC-AUC**.

Academic Background

Surgical Video Tool Segmentation & Evaluation with SAM2   **Jul 2024 – Oct 2025**
- Performed instance segmentation of surgical tools in videos using **SAM2**.
- Evaluated with **mIoU** and **Dice** coefficients across diverse procedures and severe occlusions.
- Analyzed failure cases and improved automation by optimizing **prompt generation**.
- Paper accepted by *npj Digital Surgery* (Nature Portfolio): *Systematic Evaluation and Guidelines for Segment Anything Model in Surgical Video Analysis* . (arXiv:2501.00525)

Online Judge Platform Development   **Jan 2024 - Present**
- GitHub: https://github.com/joint-online-judge/JOJ3
- Architected a high-performance Online Judge system using **Golang**, supporting **6 programming languages**.
- Implemented a **job queue** model to handle concurrent submissions for execution, scoring, and result feedback.
- Designed a secure code execution sandbox using **Docker API** and **cgroups** to enforce resource limits.
- Deployed **Prometheus-based** logging and monitoring module for real-time system health tracking.

Skills, Activities & Interests

- **Languages**: Python, Go, C/C++, SQL, R, Bash/Shell
- **ML & Data Science**: PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, OpenCV, Hugging Face
- **Technical Tools**: Linux, Docker, AWS, Git/GitHub Actions, Agile Development, Prometheus, Tableau, LaTeX
- **Certifications**: Basic SAS Certification; Basic Teaching Assistant Certificate
- **Activities**: Teaching Assistant at SJTU Global College (2023–2025); President of Technical Dept. in Student Union (Sept 2022–2025) — hosted workshops (Git, Bash, LaTeX, Vim, VSCode)
- **Honors**: 1st Place A2 Data Dive (Nov 2025); Merit Student (Oct 2024); Scholarships (Nov 2024)