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 performance (83.6)** on Online-Mind2Web, outperforming Google Gemini CUA (69.0), OpenAI Operator (61.3), and Anthropic Claude Sonnet 4 (61.0).
- Engineered a **Python-based agent tooling pipeline** to capture user operations and applied computer-vision methods to reproduce end-to-end workflows for training and evaluation.
- Scaled dataset generation on OSWorld for terminal and Office tasks. Produced massive trajectories with **standardized schemas and automated quality checks**.
- Paper: *OSGym: Super-Scalable Distributed Data Engine for Generalizable Computer Agents* (arXiv:2511.11672).

Salesforce, Inc. **Aug - Dec 2025**

Research Intern United States (Remote)

- Developed data processing scripts using **Python (Pandas)** and built data visualization dashboards.

Shanghai Baosight Software Co., Ltd. **Aug - Sep 2024**

Machine Learning Intern Shanghai, China (On-site)

- Built a **machine learning pipeline** to predict passenger flow surges across **523 stations**, integrating data ingestion, feature engineering, and model inference.
- Processed high-dimensional time-series data using **Python and SQL**, optimized model performance to **86% accuracy** and delivered the solution for **real-world operational deployment**.

Technical Projects

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.

Surgical Video Tool Segmentation & Evaluation with SAM2 **Jul 2024 – Oct 2025**

- Engineered a **modular evaluation pipeline** for video instance segmentation, integrating dataset preprocessing, **batch inference**, and automated metric reporting (mIoU/Dice).
- Developed **Python scripts** to optimize prompt generation logic for edge cases, enhancing system **automation**.
- Paper accepted by *npj Digital Surgery* (Nature Portfolio): *Systematic Evaluation and Guidelines for Segment Anything Model in Surgical Video Analysis* . (arXiv:2501.00525)

Skills, Activities & Interests

- **Languages**: Python, Go, C/C++, SQL, Bash, R
- **Technical Tools**: Linux, Docker, Git, GitHub Actions (CI/CD), AWS, Prometheus, Grafana, Agile Development, Tableau, LaTeX, Vim, VSCode
- **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)