

RUI WANG

(+1) 6072621255
ruiallen@umich.edu
hydraallen.github.io

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 on Online-Mind2Web (**83.6**), outperforming Google Gemini CUA (69.0), OpenAI Operator (61.3), and Anthropic Claude Sonnet 4 (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

Research Intern

United States (Remote)

- Conducted **10** user interviews and analyzed **200+** survey responses on AI tool usage for privacy analysis.
- Built Tableau dashboards to visualize usage trends and translated findings into actionable privacy risk 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 across **523** stations, achieving **86%** accuracy to support operational planning and proactive crowd management.
- Analyzed station-level passenger flow data, engineered time-series features, trained binary classifiers, and iterated with ROC/AUC-driven validation.

ACADEMIC BACKGROUND

Online judge platform development

Jan 2024 - Present

- GitHub: <https://github.com/joint-online-judge/JOJ3>
- Implemented a **Go-based** online judge execution and scoring system, supporting 6 programming languages.
- Implemented **container-based sandboxing** to isolate user code and improve platform reliability.
- Developed Prometheus-based logging and monitoring module to track system health in real time.

Surgical Video Tool Segmentation & Evaluation with SAM2

Jul 2024 – Oct 2025

- Performed instance segmentation of surgical instruments in videos using SAM2.
- Evaluated segmentation performance using mIoU and Dice coefficients, and analyzed model robustness across complex surgical scenarios.
- Improved automation by optimizing prompt generation for SAM2 in difficult cases.
- Paper accepted by *npj Digital Surgery* (Nature Portfolio): *Systematic Evaluation and Guidelines for Segment Anything Model in Surgical Video Analysis*. (arXiv:2501.00525)

Database tool development

Dec 2024

- Developed basic functionalities for database tool
- Added multi-threading, improving efficiency by 3 times.

Service System Modeling and Design

May 2025

- Modeling and analyzing service systems for ambulance services in NYC.

TECHNOLOGIES

- **Programming Languages:** Python, R, C/C++, Go, Matlab, SQL, Elm, SAS, HTML/CSS, JavaScript, Bash
- **Working Space:** Linux, Git, Docker, Latex, Vim, Shell, AWS, Tableau, PowerBI

CAMPUS ACTIVITIES

Teaching Assistant in SJTU - Global College

- | | |
|--|-----------------|
| • ECE4820J <i>Operating Systems</i> Course | Sept - Dec 2025 |
| • ECE2810J <i>Data Structures and Algorithms</i> Course | Sept - Dec 2024 |
| • ENGR1000J <i>Introduction to Engineering</i> Course | May - Aug 2024 |
| • ENGR1510J <i>Introduction to Computers and Programming</i> Course | Sept - Dec 2023 |
| • Design projects, hold weekly labs and recitation classes, grade assignments and exams. | |

Technical Department of Student Union in SJTU - Global College

Sept 2022 - Present

President and Annual Excellent Volunteer

- Organize and host multiple workshops , with topics including Git, Bash, LaTeX, Vim, VSCode, etc.
- Maintain the SJTU - Global College's dance party mini-program.

HONORS AND SCHOLARSHIPS

- Nov 2025: *First Place in A2 Data Dive: Campaign Finance Transparency in Michigan.*
- May 2025: *Basic SAS(Statistics Analysis System) Certification.*
- Nov 2024: *Scholarship for Student Development.*
- Oct 2024: *Merit Student of SJTU.*
- July 2024: *Third Prize in the China-U.S. Young Maker Competition.*
- May 2024: *Software Copyright Registration by the National Copyright Administration of China.*
- Dec 2023: *Basic Teaching Assistant Certificate.*
- July 2023: *Annual Excellent Volunteer in UM-SJTU JI Student Union.*
- June 2023: *Best Game Design Award in ENGR1000J of UM-SJTU JI.*
- May 2023: *Honorable Mention in the Mathematical Contest in Modeling organized by COMAP.*