

Xinrui (Ricky) Qiu

AI & Data Science | Scientific Computing | Space Applications

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EDUCATION:

Rice University

Professional Science Master's (PSM) in Space Studies

Expected 08/2026 - 12/2027

Relevant Coursework: Machine Learning, Project Management, Engineering Economy.

University of Illinois at Urbana-Champaign

B.S. in Astrophysics (GPA: 3.66/4.00)

08/2023 - 05/2026

Relevant Coursework: Scientific Computing, Numerical Modeling, Linear Algebra, Astronomical Data Analysis

Honor: Dean's List (2025 Spring)

PROFESSIONAL EXPERIENCE

VNET Group

AI Engineering Program Trainee

Beijing, China | 05/2026 – 08/2026

- Built an **AI operations and project-collaboration prototype platform** for a 2,000+ employee enterprise using Frappe, implementing 3 application modules, 11 DocTypes, and 27 API methods to manage internal AI requests, meeting records, task participation, project progress, and audit trails.
- Integrated an OpenAI-compatible LLM client with rule-based fallback and human review; implemented duplicate screening across 3 text fields and row-level access controls for 5 document types.
- Deployed a **4-container RAG prototype using Docker Compose**, repaired database migration failures, and verified indexing of all 15 sample documents across 7 knowledge bases.
- Evaluated keyword and hybrid retrieval using 14 queries over 3 PDFs containing 407 chunks, recording top-3 document hit rates of 85.7% for hybrid retrieval and 78.6% for keyword search while diagnosing embedding and generation-service failures.

National Astronomical Observatories, Chinese Academy of Sciences (NAOC)

Undergraduate Researcher

Beijing, China | 05/2025 – 08/2025

- Analyzed X-ray observations from 4 instruments—NuSTAR, Swift/XRT, NICER, and IXPE—using established Linux-based tools and XSPEC for data reduction, spectral fitting, parameter estimation, and result validation.

PROJECTS

Data Science & Computational Engineering | 05/2026 – 08/2026

- Applied established regression, SVM, clustering, and PCA methods to Falcon 9 telemetry and EuroSAT satellite imagery, alongside CNN and Transformer-based approaches for image-data analysis.

AI Stock Research Skill | Python, LLM Workflows | 07/2026 – 08/2026

- Developed a reusable research skill for A-share and U.S. equities, specifying 4 analyst roles with bull/bear review and packaging 2 Python utilities with 6 commands for valuation, source reconciliation, and trade-size validation.

Orbit Job Search Platform | TypeScript, React, Cloudflare D1 | 08/2026 – 09/2026

- Built a job-search tracker with 230 U.S. and China opportunity records, 6 application states, and 3 business tables, implementing authenticated CRUD operations, user-scoped records, and a daily goal-completion calendar.

JumpFit Personalized Fitness Mini Program | JavaScript, WeChat | 08/2026 – 09/2026

- Built a 6-page WeChat mini program with 304 offline food entries across 12 categories, featuring personalized nutrition and training plans, bilingual food search, calorie/protein calculations, trend tracking, and local backup/restore.

TECHNICAL SKILLS & AWARDS

Awards: Second Prize, Xiaosu Technology Global Hackathon (2026), Physics Bowl Regional Award (2022)

AI / ML: RAG, Statistical Analysis, OpenAI API, Prompt Engineering, AI Workflows, API Integration

Programming & Platforms: Python, Java, Pandas, NumPy, Astropy, Matplotlib, Linux, Docker, Frappe

Spoken Languages: Mandarin Chinese (Native), English (Fluent), Cantonese (Intermediate), Japanese (Basic)