Ruiqing Yu

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EDUCATION

University of Illinois Urbana-Champaign　　　　　　　　　　　　　　　　　　Champaign, IL
Bachelor of Science: Computer Science & Statistics | GPA: 3.80　　　　　　　　*Aug. 2020 - May 2024*

- Relevant Coursework: Data Structures, Computer System, System Programming, Database, Algorithm, Web Development, Cloud Development, Machine Learning Algorithms & Models, Statistical Learning, NLP, Distributed System, Optimization.

University of Illinois Urbana-Champaign　　　　　　　　　　　　　　　　　　Champaign, IL
Master of Computer Science　　　　　　　　　　　　　　　　　　　　　　*Aug. 2024 - Dec. 2025*

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, TypeScript, Java, C/C++, SQL, HTML/CSS, Dart, Golang
Framework: Next.js, React.js, Vue.js, Express.js, Flask, Django, Node.js, Flutter, PyTorch, TensorFlow, TailwindCSS
Databases & Tools: AWS S3/EC2/RDB, Docker, Redis, MongoDB, Qdrant, Redux, Git, Celery, NPM, Vercel, LangChain, LLM

EXPERIENCE

Full Stack Developer Intern　　　　　　　　　　　　　　　　　　　　　Jan. 2023 - Present
AristAI　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　*Champaign, IL*

- Developed a Retrieval-Augmented Generation system for LLM applications using **Qdrant** and **LangChain**.
- Optimized data preprocessing by chunking multimodal data and indexing in **Qdrant**, improving retrieval efficiency by **18%**.
- Built a backend server using **Django** to perform **CRUD** operations on **MySQL**.
- Reduced **33%** website rendering time by implementing Server-side rendering and Lazy Loading in **Next.js**.
- Enhanced server capability by implementing **AWS Lambda** and **DynamoDB** on servers, boosting capacity from 50 to 1,000 concurrent requests and improving reliability.

Software Engineer Intern　　　　　　　　　　　　　　　　　　　　　May. 2023 - Aug. 2023
Alphalio　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　*China*

- Constructed recursive summarization for identifying key moments in video using **LangChain**, increased **40%** accuracy.
- Developed multi-threaded pipeline for video segmentation using **Flask**, **Redis**, and **Celery**, reduced **70%** processing time.

Undergraduate Research Assistant　　　　　　　　　　　　　　　　　　　Champaign, IL
Illinois Risk Lab　　　　　　　　　　　　　　　　　　　　　　　　　*Aug. 2022 - Dec. 2022*

- Conducted regression analysis and data cleaning for datasets over 500GB, achieving an AUC of **0.82** with **LightGBM**.
- Improved binary classification precision by **27%** using **SMOTE** resampling and LightGBM tuning.
- Applied **SHAP** values and permutation methods to identify key features in model predictions.
- Developed automated data tagging and classification scripts with Python to enhance efficiency.

PROJECTS

OEASE | https://github.com/oeasenet　　　　　　　　　　　　　　　　　Jan. 2024 - Present

- A new generation of high-performance club management systems and community networks for non-profit organizations.
- Enhanced backend response and deployment efficiency using **Go Fiber**.
- Enhanced site speed by implementing code splitting and lazy loading in **Vue.js**, reducing initial load time by **20%**.

AI Resume Generator | https://github.com/Leo-rq-yu/AI$_{Resume}$　　　　　　　Dec. 2023 - Present

- An AI-enhanced one-stop job application platform offering resume optimization, mock interviews, and one-click resume submission features.
- Constructed a scalable server infrastructure using **Express.js**, achieving improvements in request processing efficiency and reduced server response times.
- Built an asynchronous task system in **Node.js** to ensure continuity in user experience.

ClassTranscribe | https://github.com/classtranscribe　　　　　　　　　　　Aug. 2023 - Present

- A new education video-based application developed at University of Illinois.
- Reduced server processing and computational costs by **80%** by embedding a large language model in the local server infrastructure.