

# Kunlin Ruan

kunlinvs@umich.edu • 616-216-0454 • Ann Arbor, MI 48105, United States • [Linkedin](#) • [Portfolio](#) • [Github](#)

## Objective

Motivated and creative upcoming graduate seeking a full-time software engineering position, specializing in backend and database. Passionate about building scalable systems, and implementing robust APIs to drive impactful solutions.

## EDUCATION

**University of Michigan** | B.S.E. in Data Science | GPA: 3.76 / 4.00

Expected Apr 2025

**Shanghai Jiao Tong University** | B.S.E. in ECE | GPA: 3.50 / 4.00

Expected Aug 2025

## WORK EXPERIENCE

### Horizon World Salon Inc.

Sep 2024 - Present

#### Backend Software Engineer Intern

- Designing system infrastructure utilizing Kafka, Redis, Amazon API Gateway and Lambda to strengthen scalability.
- Architected API endpoints using Node.js and Express.js and managed data using PostgreSQL and AWS S3.

### Graph Academy

Jun 2024 - Aug 2024

#### Software Development Engineer Intern

- Integrated and tested performance of LLMs including HumeAI and OpenAI Whisper, to evaluate model functionality and system compatibility against API costs. Presented risk assessments to manager and participated in final decision.
- Managed data efficiently with Supabase and architected API endpoints for smooth user workflows using TypeScript.
- Developed web and mobile UI using Next.js and Flutter. Enhanced frontend animation using Paper.js and forge2d.

### Niwenn

May 2024 - Aug 2024

#### Software Development Engineer Intern

- Established API endpoints using Express.js to support user commenting and enterprise news releasing notifications.
- Utilized AmazonRDS and AWS S3 for efficient multimedia data management. Performed stress testing using Apache JMeter to evaluate API performance and system scalability under high traffic conditions. Deployed on AWS EC2.

### The Michigan Daily

Feb 2024 - Apr 2024

#### Web Development Intern

- Managed and maintained the backend using PHP and TypeScript, ensuring seamless and reliable website operation.
- Built a light website version for low WiFi regions using Astro, greatly reducing JavaScript payloads and load times.

## RESEARCH EXPERIENCE

### University of Michigan, College of Engineering, Lifelong Learning Lab

Feb 2024 - Present

#### Research Assistant Intern

- Building an AI-assisted interactive React.js note-taking system to research human-AI collaborative learning process.
- Establishing RESTful APIs and utilizing Django ORM for efficient data retrieval and updates. Deploying on GCP.
- Leveraging Django Channels and Redis to enable WebSocket communication and centralized admin control, boosting reliability. Implementing task queues with Django Q to process background tasks efficiently, increasing scalability.
- Integrating Microsoft Azure Cognitive Services and ChatGPT API and utilizing LLM stuff and map-reduce chaining to largely increase quality of real-time transcript chunking and note generation and reduce AI response failure rate.

## PROJECT EXPERIENCE

### Google x MHacks AI Hackathon, SnapMeal App <https://devpost.com/software/snapmeal>

Apr 2024

- Led a team of four to build a sustainable recipe-generating app using React.js and Flask within 24 hours; score: 3 / 3. Applied Gemini-Pro-Vision model to analyze grocery photos, enabling easy logging and updating.
- Generated a user-defined number of recipes with the Gemini-Pro model, catering to user preferences, dietary restrictions, and allergies while considering logged and unexpired foods, optimizing user experience.

### Lipstick Recommendation Engine <https://lipstickexpert.netlify.app/>

Feb 2024 - Apr 2024

- Developed a web scraping pipeline using BeautifulSoup, Youtube API, and Sephora API in Python, automating data collection, preprocessing, and storage. Utilized Hadoop MapReduce for document processing and TF-IDF scoring.
- Constructed a robust scoring system based on crawled product data and NLP sentiment analysis and trained the model based on Kendall-tau distance using Python. Built user-friendly UI interface with React.js.

## SKILLS

**Programming Languages:** Python, C/C++, Typescript, JavaScript, HTML/CSS, SQL, Dart, MATLAB, R

**Frameworks/Databases:** React.js, Next.js, REST API, Django, Flask, Express.js, Flutter, Supabase, Redis, MySQL