

ROBERT KANG

rkang@umich.edu | (518)396-6467 | robertqkang.com | <https://github.com/rkang246> | US Citizen

EDUCATION

University of Michigan

Ann Arbor, MI

B.S.E. in Computer Science

Aug 2019–Dec 2022

- GPA: 3.96/4.00; Angell Scholar, EECS Scholar, University Honors, Dean's List
 - Completed: Data Structures and Algorithms • Operating Systems • Computer Organization • Linear Algebra
 - Pending: Distributed Systems • Designing a Search Engine • Networks • Foundations of CS • Machine Learning
-

EXPERIENCE

Amazon.com, Alexa Shopping

Seattle, WA (Remote)

Software Development Engineer Intern

May 2021–July 2021

- Designed and implemented internal web testing tool that streamlines config testing workflow from ~10 minutes to <5 seconds for partners across ~60 Alexa Shopping teams; developed with Java (Spring + JSP) and Javascript.
- Prepared and presented extensive research and design documents after requirements gathering sessions with partners. Authored thorough user wiki and code documentation to support long-term maintainability.
- Wrote ~1000 lines of readable, peer-reviewed code, rigorously unit tested with Jasmine/Junit and integration tested with Selenium to ensure robustness. Launched project into production 3 weeks ahead of schedule.

3M Health Information Systems

Albany, NY (Remote)

Software Engineering Intern

June 2020–Aug 2020

- Developed T*SQL process to detect individuals who are at high risk for poor outcomes if they contract COVID-19.
- Optimized scripts to populate and load tables faster by ~70% on largest client database (5 million members).
- Productionized project into Master Schedule, providing regular, actionable COVID-19 data for all 25+ HIS clients.

EECS 203 (Discrete Math), University of Michigan

Ann Arbor, MI

Instructional Aide (IA)

Aug 2020–Present

- Provide support for core CS course with 900+ students: host office hours, write/review exam/homework problem sets, manage Piazza posts, assist in online lectures. Received honorable mention for outstanding IA award.
 - Lead weekly discussion section of ~40 in reviewing lecture material and practicing problem-solving techniques.
 - Run tri-semesterly Testing Strategies Review Session to bridge gaps in test-taking experience among students.
-

PROJECTS

CrossModerator. A machine-learning-based alternative to current regex-based Reddit moderation bots. Developed in team of 4 under the comp.social lab with a Python tech stack. (Documentation: <https://www.crossmod.ml/>)

- Refactored bot to call 160+ GB FastText models via RESTful API built with Flask/Gunicorn on AWS EC2.
 - API used in separate, NSF-funded project; listed as contributor. (NSF Award Number: 1832811)
- Deployed bot to subreddit with 14 million subscribers (r/futurology) in real-time pilot study; analyzed data with NumPy and Matplotlib on Jupyter Notebook, with pending research paper to be submitted to CSCW 2021.

atlasdigital.org. Website for Atlas Digital Consulting Group; used by leadership to both acquire clients and recruit new members, receiving 500+ hits per month at peak traffic. Led team of 4 as the project manager.

- Deployed HTML/CSS/JS website as dynamic Flask webapp on AWS Lightsail with Nginx/Gunicorn.
- Designing alumni/member database (SQLite/SQLAlchemy); tasks include defining schemas, implementing user authentication, building user interface for database, developing data pipeline to populate and update member data, and refactoring frontend Team page with Jinja2 templating.

Better Reviews. A system to provide small restaurants with unbiased, actionable feedback. Currently in MVP stage.

- Pitched to Zell Lurie Institute with 30+ customer interviews, awarded Mayleben Venture Shaping grant.
-

PROGRAMMING SKILLS

Languages: C/C++, Java, Python, Javascript (+HTML/CSS), SQL, LaTeX

Technologies: Git, Flask, AWS, Spring MVC, JSP, SQLite, FastText, SQL Server Management Studio