Xiaomin Liu
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Education

New York University *May 2026*
Bachelor of Arts, Computer Science, **Minor** in Mathematics **GPA:** 3.84
Honors: Presidential Honors Scholars Program (Top 10%) | CAS Scholarship (full-ride)
Activities: BUGS@NYU EBoard Member | Tech@NYU Tech Trek Mentor
Relevant Coursework: Data Structures | Basic Algorithms | Data Management and Analysis (currently taking)

Experience

Niantic - Incoming Software Engineering Intern May 2024

BUGS@NYU - Software Developer Jan 2024 - Present
- Collaborating with a team of 6 to develop a Leetcode Multiplayer open-source platform this semester.

Vantage - Software Engineering Intern July 2023 - Oct 2023
Ruby, Ruby on Rails, JavaScript, HTML, PostgreSQL, Azure, Temporal, Sentry
- Launched Azure Active Resources, a tracking and reporting of Azure resource utilization and costs feature that enables users to filter their Azure spending by resource metadata.
- Designed and built a daily Temporal workflow that asynchronously updates ~100,000 records for over 6,500 users by leveraging Azure's REST APIs to fetch data from more than 30 different Azure services.
- Integrated a line graph using HTML and JavaScript to display aggregated related resource costs in 30 day periods.
- Minimized issues reported by Sentry logs by writing and maintaining 40 unit tests and documented how to add new Azure services for future developers.

Projects [github.com/xl4624]

Chess with Friends
Python, Flask, JavaScript, PostgreSQL, HTML, CSS, Docker
- Spearheaded a team of 3 to develop an online Multiplayer chess web application using Flask and Socket.IO to handle asynchronous communication between the server and clients.
- Implemented real-time chessboard updates, a chat feature, and a move history table in JavaScript and HTML.
- Directed project management efforts by delegating tasks among team members, conducting code reviews, and thoroughly documenting/testing the codebase.

Debugging Memory Allocator
C++
- Created a custom memory allocator using C++ that supports malloc, free, and realloc functions, capturing memory leaks and buffer overflows.
- Utilized a linear, sorted free list to manage free memory blocks and implemented methods for splitting and coalescing blocks using pointer arithmetic.

sudo ku
Go, JSON, HTTP
- Built a CLI web scraper that fetches and parses the latest Sudoku puzzles from sudoku.au and solves them using a depth-first search backtracking algorithm.

COVID-19 Visualization
Python, pandas, Matplotlib
- Analyzed and visualized COVID-19 data from the CDC COVID Data Tracker using pandas and matplotlib to create a choropleth map to track the number of cases and deaths in the US.

Skills

Languages: Python, Java, C++, JavaScript/TypeScript, Ruby, HTML, Lua, SQL, CSS, Bash
Frameworks and Libraries: Ruby on Rails, React, Flask, Django, pandas, NumPy, Matplotlib, Node.js, Express
Technologies: Git, Unix, Docker, Azure, AWS(EC2, RDS), Sentry, Temporal, Postman, Vim