

# Xiaomin Liu

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## Education

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### New York University

Bachelor of Arts, Computer Science, Minor in Mathematics

May 2026

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

## Experience

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### 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

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[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 while reporting on memory leaks and preventing buffer overflows
- Utilized a linear, sorted free list to manage free memory blocks from the buffer and implemented methods for splitting oversized freed memory blocks and coalescing adjacent blocks for 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 prioritizing the most constraining cell with the fewest legal moves

### 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 that tracks the number of cases and deaths as the pandemic progressed in the US

## Skills

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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