

# Xiaomin Liu

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## Education

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### New York University

Bachelor of Arts, Computer Science

May 2026

GPA: 3.84

Honors: Presidential Honors Scholars Program (Top 10%) | CAS Scholarship (full-ride)

Relevant Coursework: Data Structures | Basic Algorithms | Operating Systems | Programming Languages (GA) | Parallel Programming | Data Management and Analysis (Databases)

## Experience

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### Niantic - Software Engineering Intern

May 2024 - Aug 2024

Java, C#, Unity, Google Cloud Platform

- Joining the Pokémon GO: Maps/Explore/AR Team

### New York University - Research Assistant

March 2024 - May 2024

Python, pandas, PostgreSQL, Google AppSheet, Google Sheets API, Legiscan API

- Automated the **adding and tracking of 1,100+ AI-related bills** nationwide for NYU CRIL, saving more than 10 hours per week of manual searches and providing more accurate status updates

### Vantage - Software Engineering Intern

July 2023 - Oct 2023

Ruby, Ruby on Rails, JavaScript, HTML, PostgreSQL, Azure, Temporal, Sentry

- Launched Azure Active Resources, an Azure resource utilization and costs tracking feature that enables 6,500+ users to optimize their Azure spending by identifying and eliminating unused/inactive resources still incurring costs
- Designed and built a Temporal pipeline that **concurrently updates ~100,000 records** by leveraging Azure's REST APIs to fetch resource metadata across 30+ different Azure services
- Secured our biggest Azure client to date with the Azure Active Resources release, **generating \$125,000 in revenue**
- Integrated line graphs with HTML and JavaScript to visualize related resource costs over 30 day periods

## Projects

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[[github.com/xl4624](https://github.com/xl4624)]

### RCC (Current)

Rust, C, LLVM

- Building a C Compiler with a handwritten lexer and recursive descent parser, targeting LLVM IR

### Chess with Friends

Python, Flask, JavaScript, Socket.IO, PostgreSQL, HTML, CSS, Docker

- Led a team of 3 to develop an online multiplayer chess website where users can challenge others through shareable links
- Implemented real-time updates to the chessboard and move history table after a player makes a move using Flask and Socket.IO and added a chat for players to communicate during a match with JavaScript and HTML
- Directed project management efforts by delegating tasks among team members, conducting code reviews, and documenting/testing the codebase

### Debugging Memory Allocator

C++

- Developed a memory allocator in C++ using a linear, sorted free list of metadata headers to manage memory blocks
- Implemented methods for splitting oversized freed memory blocks and coalescing adjacent blocks

### Sudoku Solver

Go, JSON, HTTP

- Built a CLI web scraper that fetches and solves the latest Sudoku puzzles from sudoku.au using a depth-first search backtracking algorithm prioritizing the most constraining cell

## Skills

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Languages: Python, Rust, Java, C, C++, JavaScript/TypeScript, Ruby, HTML, Lua, SQL, CSS, Bash

Technologies: pandas, NumPy, Ruby on Rails, React, Flask, Django, PostgreSQL, MongoDB, GraphQL, Git, Docker, Azure

Concepts: Software Engineering, Backend, Full Stack, Web Development, API Development, Compilers, Augmented Reality, Distributed Systems, Data Analysis