

Xiaomin Liu

xl4624@nyu.edu | linkedin.com/in/xiaomin-liu | github.com/xl4624

Education

New York University Bachelor of Arts in Computer Science (with Honors) Coursework: Operating Systems, Programming Languages (Grad level), Database Systems (Grad level), Parallel Computing	May 2026 GPA: 3.8
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Experience

NYU High Speed Research Network Lab Research Assistant (Corelink Server) <ul style="list-style-type: none">Implementing features and services in Rust for Corelink, a low-latency networking framework for research applications	Sep 2024 – Present New York, NY
NYU Courant Institute of Mathematical Sciences Teaching Assistant <ul style="list-style-type: none">Conducting weekly office hours and grading assessments for Basic Algorithms (CSCI-UA 310), supporting 100+ students	Sep 2024 – Present New York, NY
Niantic Software Engineering Intern (Pokemon GO: Maps/Explore/AR Team) <ul style="list-style-type: none">Processed coastline data with BigQuery to define an ocean dataset, eliminating 8 billion (40% total) Pokemon spawnpointsReduced weather API calls by 78% by implementing logic in Java to invalidate ocean weather cells, saving \$280k annuallyDeveloped a distributed quadtree merging algorithm to normalize S2 cells in Apache Beam, compressing geodata by 99.1%Integrated Sentry into Pokemon GO's client using C#, .NET and Unity to monitor unhandled exceptions and crashes	May 2024 – Aug 2024 Bellevue, WA
NYU Center on Race, Inequality, and the Law Research Assistant <ul style="list-style-type: none">Automated the legislative bill searching process to Google Sheets, saving lawyers 10+ hours a week on manual searchesBuilt a Legiscan API client in Python and pandas to increase tracked bills by 175% and provide accurate bill status updates	Mar 2024 – May 2024 New York, NY
Vantage.sh Software Engineering Intern <ul style="list-style-type: none">Launched <u>Azure Active Resources</u>, a Ruby on Rails feature filtering Azure spending by resource metadata for 20,000 usersDesigned a Temporal Workflow to concurrently fetch 100,000+ records of resource metadata from 30 Azure servicesIntegrated multi-series line graphs using HTML and JavaScript to visualize related resource costs over 30-day periods	July 2023 – Oct 2023 New York, NY

Projects

S2shell Rust, C++ <ul style="list-style-type: none">Ported Google's S2 Geometry Library to Rust for robust computational geometry and spacial indexing on the sphereImplemented core S2 data structures and algorithms including S2Point, S2CellId, S2Cell, and S2RegionCreated a custom linear algebra module supporting 2D/3D vector operations like dot products, cross products, etc.	
Multiplayer Chess Python, Flask, JavaScript, WebSocket, SQL (PostgreSQL), HTML, CSS, Docker <ul style="list-style-type: none">Led a team of 3 in developing an online multiplayer chess website where users can play against each other via linksImplemented real-time board updates, a dynamic move history table, and a chat feature using JavaScript and HTMLChallenges included verifying moves, handling spectators joining mid-game, and asynchronous move broadcasting	

Skills

Languages: Python, Rust, Java, C, C++, C#, JavaScript, TypeScript, Ruby, SQL, HTML, Bash, CSS
Technologies: pandas, NumPy, Unity, .NET, Django, Flask, Docker, Azure, GCP (BigQuery, Dataflow, GCS), Sentry, Linux
Concepts: Computer Networking, Distributed Systems, Computer, Backend, Compilers, Unit Testing, Web Development