

Andrew Jiang

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Education

New York University | College of Arts and Science Scholarship

Expected 05/2026

Majors Computer Science, Math

Minors Data Science, Web Programming & Applications

Coursework Applied Internet Technology, Data Management & Analysis, Cybersecurity,
Data Structures, Algorithms, Computer Systems, Linear Algebra, Calculus III

Professional Experience

StairMed | Software Engineer Intern

05/2024 - 06/2024

C++, React, GitLab

- Built a React app to stream neuronal data from 128-channel microelectrode array at 75 fps
- Implemented websocket connection and buffer management to securely stream real-time data from BCI device
- Developed C++ signal decoders to translate neuron action potential firing to machine instruction
- Streamlined project development and deployment to codebase with GitLab CI/CD

Intuitive Surgical | Software Engineer Intern

07/2023 - 08/2023

Python, AWS S3, Lambda, ECS, EC2

- Migrated data pipeline from DVMS to DVMT (internal tools) to improve monitoring and communication
- Sharded AWS cloud database to increase data upload and query efficiency
- Created unit and integration tests on the da Vinci surgical robot and surgical environment
- Conducted firmware and functionality tests on da Vinci surgical suite to ensure DVMT function

Project & Other Experience

N-Body Particle Simulator | C, OpenGL

09/2024 - Present

- Designed a particle simulator capable of simulating over 100,000 bodies
- Implemented Barnes-Hut algorithm with quadtrees to compute particle interactions in $O(n \log(n))$ time
- Used OpenGL to visualize particle simulation and added UI features like zoom and playback speed

SpendWisely | Next JS, SQLite, Flask

09/2024 - 09/2024

- Developed a full-stack personal financing advisor web app for the PennApps XXV hackathon
- Categorized user bank statements and showed visualizations, statistical analysis, and future projections
- Utilized Notion roadmap and Kanban board to keep track of product development and manage sprints
- Secured API endpoints and authentication with PropelAuth, and deployed project to cloud with Defang

Harmonize | Scikit-Learn, React Native, Rust, PostgreSQL

06/2024 - 07/2024

- Engineered a full stack music discovery social media platform for TikTok Tech Jam 2024
- Created KNN classification pipeline using 9 million songs to categorize user listening preferences
- Integrated Spotify Web API and Web Playback SDK to recommend new music to users
- Developed reinforcement learning algorithm to personalize content recommendation

NYU Courant Teaching Assistant | Python

09/2023 - 12/2023

- Tutored and graded Introduction to Computer Programming (CSCI-UA 002)

Skills and Interests

Expertise Full Stack Development, Machine Learning, Embedded Systems

Frameworks Next, React, Vue, Express, Node JS, PostgreSQL, MySQL, MongoDB, Jupyter, AWS

Languages Python, Java, C/C++, Go, Rust, JavaScript, Typescript, Tailwind, Docker, Git CLI

Interests Tech trends, hackathons, basketball, volleyball, writing, sci-fi

Clubs NYU Osiris Lab, Tech@NYU, BUGS