

RICKY ZHANG

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EDUCATION

New York University

Expected May 2025

B.S. in Computer Science – GPA: 3.8

New York, NY

- **Relevant Coursework:** Data Structures & Algorithms, Object Oriented Programming, Intro to Databases, Web & Full Stack Development, Computer Architecture, Operating Systems, Design & Analysis of Algorithms, Computer Networking, Computer Security, Software Engineering, Network Security, Agile Software Development & DevOps

EXPERIENCE

Software Engineer Intern @ Pupil

Mar 2024 – May 2024

TypeScript, JavaScript, SvelteKit, React Native, GSAP

New York, NY

- Developed responsive UI components for the landing page using SvelteKit and Tailwind CSS, improving mobile viewport adaptability and reducing CSS bundle size by 158KB
- Implemented scroll-triggered animations using GSAP, creating dynamic service feature reveals and parallax effects
- Optimized React Native API calls using memoization and debouncing, reducing data fetching time by 200ms
- Built lazy loading system with progressive thumbnails using intersection observer, reducing initial load time by 45% while optimizing memory usage

IT Operations Intern @ Con Edison

Jun 2023 – Jan 2024

SQL, SharePoint, Python

New York, NY

- Developed SQL/Python solution to detect scheduling conflicts across 400+ weekly appointments, integrating Google Maps API for travel-time feasibility and reducing scheduling errors by 16%
- Created a SharePoint-based shift summary system with Power Apps form customization and automated Teams/Outlook notifications
- Developed Excel macros to automate formatting of crew and vehicle utilization reports, reducing manual processing time by 70%
- Performed time audits for take-home vehicle logs, ensuring precise overtime reporting and reducing overtime costs

Computer Science Tutor @ New York University

Sep 2022 – Jun 2023

Python

New York, NY

- Provided one-on-one tutoring to 15 undergraduate students per week in Data Structures and Python programming

PROJECTS

Shadowdash | C++, Ninja Build System, CircleCI

- Developed a high-performance build automation tool that outperforms Ninja by replacing interpreted syntax with compiled C++, reducing build times by up to 7% for large-scale projects like LLVM (1M LOC)
- Engineered a build manifest converter to transform over 500 existing Ninja build files to the new C++ format, enabling efficient testing and benchmarking against Ninja
- Implemented CI/CD pipeline using CircleCI, automating code compilation and performance benchmarking

SoHo Shopper | React, Vite, Express, TypeScript, Tailwind, MongoDB, Docker, GitHub Actions, Google Maps API

- Developed a responsive web application that optimizes shopping routes in SoHo, integrating data from 500+ stores via Google Places API and reducing average trip planning time by 70%
- Implemented a pathfinding algorithm inspired by the Traveling Salesman Problem, processing user-selected stores to suggest the most efficient shopping path and reduce walking distances
- Implemented user authentication and personalized store list saving functionality, allowing users to create and manage up to 20 shopping itineraries with an average load time of under 500ms

Politigram | JavaScript, Next.js, Tailwind, Vercel, MongoDB, BERT, Google Cloud Vision

- Launched a pioneering social media web application filtering content based on a political spectrum slider
- Trained the PoliBERT machine learning model to perform sentiment analysis and evaluate images using PyTorch and the Google Cloud Vision API

SKILLS

Languages: TypeScript, JavaScript, Java, C++, C, Python, SQL, Bash, x86, HTML/CSS

Technologies: Git, Docker, GitHub Actions, Next.js, SvelteKit, React Native, Nodejs, Express, Flask, PostgreSQL, MySQL, Redis, MongoDB, AWS (S3, DynamoDB, RDS), Firebase, Redux, Tailwind, Selenium, Pandas, Spring Boot (beginner level)