# Jeffrey Chen

#### Education

#### New York University

Sept 2020 - May 2024

Bachelor's in Computer Science

**Relevant Coursework:** Discrete Math, Linear Algebra, Basic Algorithms, Data Structures, Theory of Computation, Computer System Organization, Operating Systems, Data Management Analysis, Software Engineering, Agile Development & DevOps, Applied Internet Technology.

### Experience

## Software Engineer Intern

Manhattan, NY

Pupil

October 2023 - May 2024

- Improved perceived load time by 25% using preloaders and state-based rendering for smooth startup.
- Replaced deprecated carousel library, cutting initialization time by 45% and improving page responsiveness.
- $\circ$  Reduced carousel bundle by  $\sim$ 400KB, improving load time and Lighthouse performance metrics.
- Reduced image load delays by 20% and increased carousel engagement by 15% via preloading and autoplay.

## **Projects**

Sales Insights Agent | Python, Google ADK, Vertex AI, BigQuery ML, BQML

2025

- Built a multi-agent data science workflow on top of Google's Agent Development Kit (ADK) to ingest, clean, and analyze cosmetic sales data.
- Integrated sub-agents/tools to automate SQL querying, advanced analytics, and predictive modeling.
- Implemented retrieval-augmented generation (RAG) for context-aware insights and natural-language querying of sales data.

Sales Analytics API | Java, Spring Boot, JPA, H2, Maven, JUnit, Git

2025

- Built a RESTful backend to manage cosmetic sales data, featuring CRUD operations, validation, and exception handling.
- Designed a layered Spring Boot architecture with entity models, JPA repositories, controllers, and global error handling.
- Implemented unit and integration tests using JUnit and Mockito to ensure reliability across service and controller layers.

Matcha Generator | Next.js, React, FastAPI, Llama 3.1, Docker, Vercel

2025

- o Developed an AI-powered recipe generator using Llama-3.1 via Hugging Face Inference API.
- Integrated end-to-end data validation and error handling from FastAPI backend to responsive Next.js UI.
- Refactored FastAPI backend into a Vercel serverless API route for seamless, scalable deployment.
- Containerized backend and frontend applications using Docker for consistent development environments.

Personal Website | Vue.js, HTML, CSS, Typescript, Tailwind, Git

2025

- Developed a personal website with project showcases, about me, and resume with 1500+ impressions.
- Configured a custom domain with automated CI/CD using GitHub Actions, deployed via Cloudflare, and integrated SMTP server for email forwarding.

#### Technical Skills

Languages: JavaScript, TypeScript, Python, Java, HTML, CSS, C, Kotlin, SQL, Cypher, JSON, SCSS, Dart, LaTeX

**Technologies:** Vue, Svelte, React, React Native, Flutter, Tailwind CSS, Node.js, Express, pandas, matplotlib, MongoDB, PostgreSQL, Neo4j, Git, GitHub Pages, Jupyter, Visual Studio Code, Android Studio, Figma, Docker, Kubernetes, Vercel, Cloudflare, Firebase, Google ADK, Vertex AI, BigQuery, BQML, Retrieval-Augmented Generation (RAG)