

Jennifer Chen

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EDUCATION

Brown University, *Concurrent B.S. & M.S. Computer Science*, 3.95/4.0 GPA Sep 2021 – May 2025

Relevant Coursework: Operating Systems, Distributed Systems, Networks, UI/UX, Computer Systems, Embedded Software, Prescriptive Analytics, Deep Learning, Machine Learning, Self Supervised Learning, Software Engineering, Data Science

SKILLS

Languages: Python, Java, C/C++, Go, SQL/SQLite, Javascript, Typescript, HTML, CSS

Tools & Frameworks: Git, Github, Figma, Docker, Linux, React, PyTorch, TensorFlow, Node.js, AWS, Bash, NumPy

TECHNICAL EXPERIENCE

Harvard Medical School Dpt. Biomedical Informatics, *Software Intern* Boston, MA | June – Aug 2024

- Engineered a scalable backend Python package to bridge information gaps through dataset retrieval, processing, and visualization using open-source database REST APIs for the [Vitesse](#) visualization tool; prototyped integration in Figma
- Trained and fine-tuned a large language model on high-performance computing clusters to predict missing biological information in datasets and expand tool query services; curated ground truth data, benchmarked model performance

AstraZeneca, *Data Science & Computational Chemistry Intern* Waltham, MA | June – Aug 2023

- Developed machine learning models to predict metabolic substrates and advance the drug discovery process
- Built data processing pipelines, analyzed and engineered comprehensive datasets and improved model accuracies by 40%
- Presented project findings to multi-disciplinary scientists and provided global deployment recommendations

Genomics and Machine Intelligence Lab, *Research Assistant* Providence, RI | Sep 2022 – Aug 2024

- Deployed an accessible full-stack web application for cancer biology analysis using a React frontend and Java backend with interactive network visualizations and integrated API-based database search at the Genomics & Machine Intelligence Lab
- Implemented a SQL database from scratch for an application backend, designed multiple table schemas and created complex queries to extract meaningful biological relationships and expand tool functionality

LEADERSHIP EXPERIENCE

Brown University Dpt. Computer Science, *Head Teaching Assistant* Providence, RI | Sep 2022 – Present

- Spearheaded course content development and coordinated class operations for a new Foundations of Artificial Intelligence course of 30+ teaching assistants and 400+ students across two semesters
- Delivered personalized instruction to students in intro computer science and discrete structures & probability classes

Birbs at Brown University, *Founder & President* Providence, RI | Apr 2023 – Present

- Created and scaled a campus initiative that distributes free, handmade crochet birds to engage students, promote wellbeing
- Published in [local/university](#) news, 6k [Instagram](#) followers, 6k fundraised for charity, collaborated with local businesses

TECHNICAL PROJECTS

Internet Protocol & Transmission Control Protocol | *Go, Docker, Lua* Oct – Nov 2024

- Engineered an RFC-compliant IP/TCP with thread safety, retransmission queues, and connection teardown from scratch
- Implemented robust concurrency control and synchronization techniques for efficient and reliable program execution

Arduino Music Multitool | *C, Arduino IDE* Oct – Dec 2024

- Developed an embedded software with multimodal UI integrating a metronome, tuner, and note player for musicians
- Engineered a finite state machine and traceability matrix to manage system states, transitions, and enforce requirements
- Created a robust testing framework of unit, system, and integration testing with MC/DC coverage to ensure reliability

Cost-Minimizing Transportation Routing Optimization Model | *Java* May 2024

- Designed and implemented a solver from scratch using local search and metaheuristics to optimize transportation routing under constraints like vehicle capacity, ensuring feasible solutions with a curated vehicle repacking algorithm
- Achieved a 50% average cost reduction for simulated NP-hard product delivery tasks using model solutions

Warp Terminal Community Platform | *Figma* April 2024

- Developed a high-fidelity, interactive Figma prototype for a community feature UI in Warp Terminal software
- Collaborated with Warp senior product designers, refined product and incorporated feedback in an iterative design process