Nancy J. Chen

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Education

Tufts University **Sep 2023 – May 2027**

Bachelor of Science in Computer Science and Mathematics, Minor in Computer Engineering *Boston, MA*

GPA: 3.70, Dean's List since Sep 2023

Relevant Coursework

- Machine Structure and Assembly Language Programming
- Algorithms
- Data Structures
- Programming Language
- Reinforcement Learning

Technical Skills

Languages: Typescript, JavaScript, Python, Java, C, C++, Assembly, Bash, HTML/CSS, SQL, Linux
Frameworks: Next.js, React.js, Bootstrap, NumPy, Pandas, Scikit-Learn, OpenPyXL, Java Swing, ROS
Dev Tools: VS Code, Docker, Flask, Wireshark, Solidworks, AutoCAD, JetBrains IDEs (i.e. IntelliJ, PyCharm), Git

Experience

Amazon Advertising **Oct 2021 – Oct 2024**

Data Analyst Associate *Manhattan, NY*

- Updated the Insights Team's internal website using HTML, CSS, and XWiki, collaborating with webpage owners to streamline content and remove outdated pages.
- Enhanced SQL queries for ad product insights across five countries, driving improvements in brand awareness, consideration, and conversion rates.
- Created 10+ IMDB audience profiles by leveraging SQL, Excel, and PowerPoint for data retrieval, analysis, and visuals.

Tufts University StAAR Center **Aug 2024 – Present**

Core Subjects Tutor *Boston, MA*

- Deliver one-on-one and drop-in tutoring for undergraduate students in computer science and math courses, especially in Data Structures and Algorithms, to help them master course concepts and develop independent learning strategies.
- Maintain a 5/5 average across all tutor evaluation categories, with students highlighting clear, patient explanations and personalized pacing as most helpful.

Research

Research Experiences for Undergraduates (REU) Program in Data Science **Jun 2024 – Aug 2024**

NSF-sponsored REU site, hosted by Tufts University *Boston, MA*

- Conducted research on Augmented Reality (AR) with PhD Candidate Brennen Miller-Klugman under the supervision of Professor Jivko Sinapov at the Multimodal Learning, Interaction, and Perception Lab.
- Utilized human-in-the-loop reinforcement learning techniques to identify the most effective AR visualizations for enhancing robot obstacle navigation training, while analyzing the impact of AR on user training strategies.
- Learned how to develop and deploy a Flask web interface for real-time robot control, utilizing Docker for containerization and integrating with ROS to enhance user interaction and accessibility.

Projects

Bill Splitting Automation Tool | *Python, OpenPyXL* **Jul 2025**

- Built automated bill-splitting application using Python and OpenPyXL that generates dynamic Excel workbooks with interconnected formulas, reducing group payment settlement time from hours to minutes.
- Designed scalable spreadsheet architecture with conditional logic that automatically adjusts to any group size and calculates proportional cost distribution including taxes and tips.

Catch It, Recycle It | Runner-Up, Environmental Track, JumboHack 2024 | *Java, Java Swing, Trello* **Feb 2024**

- Led the development of an interactive recycling-themed game with a team of five at Tufts University, aimed at raising environmental awareness and promoting sustainability.
- Designed a user-friendly interface, ensuring seamless integration of GUI and sprite components.
- Employed agile methodologies to effectively manage project tasks and enhance the development process.

Musical Java | 1st Place, Project Showcase, Brooklyn Technical High School | *Java, Java Swing* **Jan 2022**

- Independently built a Java Swing application integrating the JFugue music library to generate and play songs with real-time instrument switching, demonstrating strong object-oriented design, event-driven programming, and third-party library integration.

Certifications

Machine Learning Foundations e-Certificate by Cornell University (2024) [view]
Python for Everybody Specialization by University of Michigan (2022) [view]