

Rayna Yu

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EDUCATION

Northeastern University

Boston, MA

Bachelor of Science

Expected graduation: May 2028

Computer Science and Mathematics

GPA: 4.0/4.0 | Honors: Dean's List, Dean's Scholarship

Relevant Coursework: Object-oriented design, Algorithms (Graduate-level), Artificial Intelligence, Theory of computation,

Matrix Methods in Data Analysis and Machine Learning, Linear Algebra, Probability and Statistics

SKILLS

Languages: Java, Python, MATLAB, JavaScript, TypeScript, SQL (PostgreSQL), HTML/CSS

Tools & Libraries: React, Node.js, FastAPI, PgAdmin 4, NumPy, Scikit-learn, Pandas, Turf.js, Linux

Other: Git/Github, Visual Studio Code, Eclipse IDE

EXPERIENCE

Northeastern University Khoury College of Computer Science

Boston, MA

Teaching assistant, CS 2800: Logic and Computation

September 2025 - Present

- Support 100+ students in propositional logic, first-order logic, computability, and formal proofs using Python and OCaml
- Lead review sessions and supported assignment comprehension through weekly office hours focused on formal reasoning and theory application

Code 4 Community

Boston, MA

Software Developer

January 2025 - Present

- Collaborated with a team of developers to build full-stack web applications for non-profits across Boston, translating organizational requirements into secure, accessible, and scalable solutions
- Streamline backend operations for a recruitment portal using React, PostgreSQL, PgAdmin 4, and Node.js to ensure efficient data storage, retrieval, and processing

Teuscher Lab

Remote

Undergraduate Researcher

May 2025 - August 2025

- Engineered a React Native mobile navigation app integrating multi-source GeoJSON datasets, OpenRouteService API, and FastAPI backend to detect and flag pedestrian route hazards in real time
- Trained and evaluated logistic regression and random forest models in Scikit-learn, Pandas, and NumPy to assign crash risk weights to pedestrian infrastructure hazards using historical collision data with a 94% accuracy rate
- Published and presented first-author paper at the Final Symposium (paper available upon request)

Northeastern University Khoury College of Computer Science

Boston, MA

Teaching assistant, CS 1800: Discrete Structures

May 2025 - July 2025

- Assessed 100+ assignments and exams using standardized rubrics and digital tools, delivering timely and actionable feedback
- Facilitated weekly recitations and office hours for 30+ students, enhancing understanding of logic, set theory, and discrete math concepts, improving student scores by 50%

PROJECTS

Robot Path Planner - Matlab

- Engineered a 2D robot path planner combining Dijkstra and reinforcement learning for real-time, collision-free navigation

Personal Portfolio - HTML, CSS, JavaScript

- Built a responsive portfolio website to showcase projects and skills; implemented dynamic project filtering, smooth scrolling, and a functional contact form

Calendar Application - Java, GUI, Swing

- Designed a calendar application using object-oriented design principles and MVC architecture, supporting event creation, deletion, and editing with a graphical interface.

Nim Sum Player - Python

- Programmed an AI to optimally play Nim using XOR and binary strategies, guaranteeing a win when possible.

VOLUNTEER EXPERIENCE

Animal Rescue League of Boston

Boston, MA

Shelter Support

August 2023 – Present

- Assist with daily animal care for 50+ cats, ensuring a clean and safe environment, and contributed to team efforts to improve animal welfare by collaborating on animal behavior assessments.