Michelle Liu

📞 (775) 772-8748 | ✉ michelle_h_liu@brown.edu | 🔗 michelleliu-4 | 🐙 michelleliu4 | 🔗 michelleliu4.github.io

EDUCATION

Brown University — Expected May 2025
Sc.B. Applied Math – Computer Science, GPA: 4.00/4.00 — *Providence, RI*
Relevant Coursework: Machine Learning, Deep Learning, Systems, Data Structures & Algorithms, Honors Statistics, Graph Theory, Abstract Algebra, Numerical Methods for Partial Differential Equations, Operations Research
Awards: Robinhood Hackathon for Social Good Bronze, Harvard WECode Fellow, Citadel Terminal, Doyle Foundation Scholarship

University of Nevada Reno — May 2021
High School Dual Enrollment, GPA: 4.00/4.00 — *Reno, NV*
Relevant Coursework: Topology, Real Analysis, Game Theory, Number Theory, Calculus III, Linear Algebra, Microeconomics
Awards: AIME Qualifier, National Science Bowl Top 32, Canada/USA Mathcamp Alumni, National Merit Scholar

EXPERIENCE

JP Morgan & Chase — May 2023 – Aug 2023
Incoming Software Engineer Intern — *New York, NY*

Visual Prosthesis Lab — Sep 2022 – Present
Undergraduate Research Assistant — *Providence, RI*
- Research and implement **computer vision** frameworks in **Python** to assist visually impaired individuals with navigation
- Develop visual prosthetic devices with object localization utilizing YoloV5, grasping utilizing Text2Voice, and OCR

Brown University — Aug 2022 – Present
Undergraduate Teaching Assistant — *Providence, RI*
- Develop assignments, workshops, and projects as well as assist over **300 students** in office hours
- Courses: Statistical Inference, Graduate Machine Learning (Spring 2023), Functional Programming (Fall 2022)

Western Digital — May 2022 – Aug 2022
Software Development Engineer Intern — *Milpitas, CA*
- Designed test prioritization algorithm using **Python** and **machine learning**, increasing test cycle efficiency by over 50%
- Constructed regression, random forest, and neural network models to predict test failures with 95% accuracy
- Utilized **FastAPI** and **SQL** queries to access and post algorithm performances on **Elasticsearch**

Jane Street — Mar 2022
First-Year Trading and Technology (FTTP) Fellow — *New York, NY*
- Selected as one of 60 students for this highly competitive program to learn market-making and algorithmic trading
- Programmed trading bot in **Python** placing **3rd in electronic trading competition**

ACTIVITIES & LEADERSHIP

Brown Machine Intelligence Community — Oct 2022 – Present
Executive Board Member — *Providence, RI*
- Design machine learning projects and workshops such as MNIST, Flappy Bird, NLP, and neuro style transfer
- Lead conceptual workshops and assist students in understanding machine learning concepts and coding the projects

Applied Math Dept. Undergraduate Group — Mar 2022 – Present
Executive Board Member — *Providence, RI*
- Collaborate with board members to lead club of over **200 students** and create website (brownamdug.wordpress.com)
- Manage over $600 budget and coordinate events such as the Applied Math Mixer and Advising Event

PROJECTS

Jreamboard | *React, Node.js, Express* 🐙
- Created a podcast social media web application for the Jream Foundation at the JP Morgan **Code for Good Hackathon**
- Prototyped frontend using **Figma** and implemented UI using **React**, designing a login and audio posts page
- Constructed backend architecture using **Express** and **PostgreSQL** to store audio and account information

Citadel Datathon | *Python* 🐙
- Collaborated with team members to analyze geographical discrimination of loan applications using k-means clustering
- Utilized **NumPy**, **pandas**, seaborn, SciPy, and other Python libraries to construct visualizations

SKILLS

Languages: Python (proficient), C, Javascript, HTML/CSS, ReasonML, (intermediate), Java, SQL, MATLAB (novice)
Frameworks & Tools: Git, NumPy, Tensorflow, Node.js, React, Express, PostgreSQL, Figma, WordPress
Interests: Rock climbing, aerial silks, piano, music arrangement