Michelle Liu

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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, Data Structures & Algorithms, Numerical Methods for Partial Differential Equations, Honors Statistics, Linear Optimization, Abstract Algebra
Awards: Harvard WECode Fellow, Meta ABCS Fellow, Citadel Summer Invitational 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

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 Computer Science   Aug 2022 – Present
Undergraduate Teaching Assistant for CSCI 170   *Providence, RI*
- Develop assignments, workshops, and projects in **Racket** and **ReasonML** as well as assist over **150 students** in office hours
- Lead and organize collaborative workshops to reinforce conceptual ideas and discuss challenging problems

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**

LEADERSHIP & ACTIVITIES

Brown Machine Intelligence Community   Oct 2022 – Present
Executive Board Member   *Providence, RI*
- Design machine learning projects such as MNIST, Flappy Bird, NLP, and neuro style transfer
- Lead conceptual workshops and assist students in coding workshops based on 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)
- Organize and coordinate social outreach for 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); ReasonML, Racket (intermediate); Java, Javascript, C, SQL, MATLAB (novice)
Technologies & Tools: Git, Node.js, React, Express, Figma, WordPress
Interests: Rock climbing, aerial silks, piano, music arrangement