

# Maima Islam

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## EDUCATION

### Brown University

B.S. in Computer Science

- o Concentration in **Artificial Intelligence & Machine Learning** | GPA: 3.70/4.00
- o **CodePath** Certification in Web Development (React, Node)

Providence, Rhode Island

Expected Graduation May 2026

## EXPERIENCE

### Database Group @ Brown University

Research Assistant, Prof. Ugur Cetinintemel

- Led development of a custom LLM (Ollama, DSPy, PyTorch) from a patient dataset for neuroscience.
- Validated efficacy of summarization with real neuroscientists using the LLM as an interactive knowledge base.
- Implemented and benchmarked performance on Medcon, Rouge, and BertScore metrics.

Providence, Rhode Island

May 2024 – Aug 2024

### Takachar

Data Science Intern

- Analyzed 1,000+ video files extracting essential biomass metadata and identifying failure rates in pollution.
- Performed regression analysis demonstrating the efficiency of biofuel production from agricultural waste is 45%.
- Ideated 50 bio-products such as biocomposite materials and eco-friendly fertilizers for rural communities.

Providence, Rhode Island

Jan 2024– March 2024

### Computational Linguistics @ Brown University

Teaching Assistant

- Explained NLP concepts (text classification, word embeddings, language modeling) and assisted debugging code across both traditional and deep learning approaches to 400+ students.
- Hosted office hours with the most consistently high attendance and received positive ratings from 10% of students.

Providence, Rhode Island

Sept 2023 – Current

### Bioengineering Group @ New York University

Data Science Research Intern, Prof. Weiqian Chen

- Analyzed endothelial cell alignment data (Python, MATLAB) identifying key patterns in response to mechanical forces within a micropatterned cell sheet.
- Processed and interpreted data from 500,000 traction and intercellular force experiments, applying statistical modeling to uncover critical insights into vascular cell alignment, which advanced research conclusions by 20%.

Brooklyn, New York

May 2022 – Aug 2022

## PROJECTS

### Graph Quest (CS 200) [github.com/mislam26/Graph-Quest](https://github.com/mislam26/Graph-Quest)

April 2024

- Developed a graph traversal application (Java) to manage and optimize routing across various data structures, enhancing the system's efficiency in pathfinding and connectivity analysis.
- Implemented comprehensive testing frameworks with JUnit, ensuring validation of graph operations and error handling across multiple graph scenarios.

### Decision Tree (CS 1420) [github.com/mislam26/Decision-Tree](https://github.com/mislam26/Decision-Tree)

March 2024

- Implemented self-supervised learning algorithm to generate functions used to categorize tabular data.
- Compared algorithm performances, demonstrating what learning methods are more effective for different datasets.

## ACTIVITIES AND LEADERSHIP

### Girls Who Code

President, Events Chair

- Coordinate meetings with 70+ members and represent the organization as the primary contact.
- Mentor local high schoolers, teaching Python/Java and providing academic advice.
- Hosted over 20 events connecting students to industry including companies Google and Bloomberg.

Providence, Rhode Island

Sept 2023 – Current

### Brown University Hackathon

Mentor

- Provided guidance and mentorship to participating teams throughout the entire hackathon duration, assisting them in refining their project ideas, overcoming technical challenges, and optimizing their solutions for presentation.

Providence, Rhode Island

Sept 2023 – Current

## SKILLS

**Programming:** Python (numpy, pandas), MATLAB, Java, SQL, Node.js

**Technologies:** LLM frameworks (Ollama, DSPy)