Maima Islam

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EDUCATION

Brown University   **Providence, Rhode Island**
B.S. in Computer Science   *Expected Graduation May 2026*
- o   Concentration in **Artificial Intelligence & Machine Learning** | **GPA:** 3.70/4.00
- o   **CodePath** Certification in Web Development (React, Node)

EXPERIENCE

Database Group @ Brown University   **Providence, Rhode Island**
Research Assistant, Prof. Ugur Cetinintemel   *May 2024 – Aug 2024*
- 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.

Takachar   **Providence, Rhode Island**
Data Science Intern   *Jan 2024– March 2024*
- 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.

Computational Linguistics @ Brown University   **Providence, Rhode Island**
Teaching Assistant   *Sept 2023 – Current*
- 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 (XX%) from students.

Bioengineering Group @ New York University   **Brooklyn, New York**
Data Science Research Intern, Prof. Weiqian Chen   *May 2022 – Aug 2022*
- 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%.

PROJECTS

Graph Quest (CS 200) 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   *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   **Providence, Rhode Island**
President, Events Chair   *Sept 2023 – Current*
- 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.

Brown University Hackathon   **Providence, Rhode Island**
Mentor   *Sept 2023 – Current*
- 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.

SKILLS

Programming: Python (numpy, pandas), MATLAB, Java, SQL, Node.js
Technologies: LLM frameworks (Ollama, DSpy)