# Mohamed Mohamed

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## Education

**Boston University** Expected December 2025

Bachelors of Science in Computer Engineering, Machine Learning

*Relevant Courses:* Data Structures & Algorithms, Software Design C# & .NET, Machine Learning, Software Engineering, Deep Learning, Operating Systems, Computer Networking, Computer Organization, Logic Design

## Experience

**Software Engineering - Neural Coding** *Boston University Engineering* Boston, MA, Sep 2024 - Present

- Building an algorithm to classify danger sounds and alarms by processing real-time audio data and adjusting to different environments
- Creating a mobile app for real-time alerts and device monitoring
- Ensuring real-time data transfer between the bracelet and mobile app using Flutter and REST APIs/WebSockets

**Software Engineering Intern** *AthenaHealth* Boston, MA, Jun 2024 - Aug 2024

- Collaborated with scrum team to develop ML model to extract important entities like lab analyte names values, report status, and accession IDs from an unstructured medical lab document
- Processed raw OCR data, tokenizing text, and matching ground truth values to tokens
- Fine-tuned a pre-trained LayoutLM model for token classification to improve entity recognition accuracy

**Software Engineering - AI/ML** *Boston University School of Medicine* Boston, MA, Jul 2023 - Oct 2023

- Developed machine-learning image segmentation models for neurodegenerative diseases and cancer
- Built a website to display ML models for kidney biopsy image segmentation
- Connected the front-end with the back-end servers, which ran the machine learning models

**Software Engineering Intern** *AthenaHealth* Boston, MA, Jun 2023 - Aug 2023

- Created ML models using different classification models, such as Naive Bayes, Random Forest, Linear Regression and Logistic Regression, to automatically categorize clinical documents sent via fax
- Developed natural language pre-processing pipelines with Spark, multiprocessing, and other technologies to pre-process the documents ahead of train time, including tasks such as tokenization, stemming, and stop-word removal
- Achieved a 30% reduction in touch-less faxes, resulting in significant cost savings for the company

**Software Engineering - AI/ML** *The University of New Mexico* Remote, Jan 2023 - Jun 2023

- Developed a geospatial model of downslope drainage routes from abandoned and active mines (coal, uranium, and lithium) across the lower 48 states
- Designed in Python and Jupyter Notebooks to automate repetitive tasks and parallelize across multiple cores and workstations
- Classified livestock animal behaviors based on GPS accelerometer data
- Programmed different machine learning approaches (supervised vs unsupervised)

**Software Engineering - ML/Electronics** *Northeastern University (REU)* Boston, MA, May 2022 - Aug 2022

- Focused on solar energy and battery energy storage systems with the goal of sizing a battery for a 20MW PV Installation in Tallahassee, Florida.
- Introduced to fundamental knowledge of Power Electronics (Power Topologies).
- Cleaned, analyzed, and plotted data using linear interpolation. Used rule based algorithms (Clear Sky Modeling). Modeled battery interaction with Tallahassee PV Farm.

## Activities

**Vice Chair - National Society of Black Engineers** *New England Zone* Boston, MA, July 2024 - Present
**2023 Software Engineering Fellow** *Hack.Diversity* Boston, MA, Jan 2023 - Aug 2023
**Black Men Lead** *City of Boston* Boston, MA, Oct 2022 - Dec 2022
**Math Instructional Design** *Digital Ready* Boston, MA, Sep 2022 - Dec 2022