

M Mohaiminul Islam

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EDUCATION

South Asian University, New Delhi, India

Master of Science in Computer Science

Total CGPA: 6.24/9.0

Noakhali Science and Technology University

Bachelor of Engineering in Computer Science and Telecommunication Engineering

*Total CGPA: 3.14/4
Last 4 semesters: 3.34/4*

RESEARCH INTERESTS

Legal NLP and Text Analytics, Low-Resource Language Technologies, Natural Language Processing, Large Language Models, Retrieval-Augmented Generation (RAG), Knowledge Graphs, Knowledge-Based AI, Graph Neural Networks, Graph Representation Learning, Speech Processing, Multimodal AI, Vision-Language Models, Agentic AI, Social Network Analysis, and AI in Mental Health.

THESIS

BSc Thesis Project: Recognition and Classification of Reptile Species using Deep Learning Techniques

Supervisor: Koushik Chandra Howlader

2017-2018

- Developed a research project focused on leveraging deep learning techniques for the automatic identification and categorization of reptile species using visual data.

MSc Thesis: Learning Stress-Specific Embeddings using Contrastive Learning over Skip-Gram Model for Stress Detection from Social Media Posts.

Supervisor: Dr. Amit Banerjee

2020-2021

- Proposed a stress-detection approach for social-media text by learning stress-specific embeddings through a Skip-Gram formulation over Transformer-based representations with supervised contrastive learning. Evaluated the approach with BERT and MentalBERT across three datasets, demonstrating improved performance and cross-dataset generalizability.

PUBLICATIONS

PEER-REVIEWED CONFERENCE PAPER (ACCEPTED)

M. M. Islam et al. "IndicIPR-QA: A Benchmark for Extractive Question Answering on Indian IPR Laws". *Accepted for Long (Oral) Presentation at the 13th IEEE International Conference on Data Science and Advanced Analytics (DSAA 2026), New Delhi, India, 6–9 October 2026.*

JOURNAL MANUSCRIPTS (SUBMITTED)

M. M. Islam et al. "Automatic Speech Recognition in Bengali Low-Resource Dialects: A Mini Review". *Submitted to Frontiers in Communication (Section: Language Communication).*

JOURNAL MANUSCRIPTS (UNDER REVIEW)

M. M. Islam et al. "BanglaMix: Dataset and Benchmark for Code-Switching ASR in Bengali Dialects". *Under Review at Q1 Journal.*

M. M. Islam et al. "IPRON: Auditing Knowledge-Graph-Augmented Legal Question Answering". *Under Review at Q1 Journal.*

M. M. Islam et al. "When Statutory References Break Semantic Retrieval: Diagnosing Extractive Question Answering over Indian Intellectual Property Statutes". *Under Review at Q1 Journal.*

PROJECTS

A Multi-Label NLP Classifier for Fine-Grained Quotation Categorization <i>ONNX, Transformers</i>	April 2023
Developed a multi-label NLP classifier to categorize quotations across 138 fine-grained categories. Link	
Deep Learning-Based Vehicles Image Recognizer <i>PyTorch, fastai, ETL, Hugging Face, Google Colab</i>	Dec 2023
Developed a deep-learning image classifier for recognizing multiple vehicle categories. Link	
Enhancing Waste Management through Computer Vision <i>YOLOv5, DVC, MLflow, CI/CD, AWS</i>	April 2023
Developed a computer-vision pipeline for waste detection to support automated environmental monitoring. Link	
Prison Management System <i>PHP, HTML/CSS, Node.js, MySQL, Git, Unix Shell, VS Code</i>	May 2017
Developed a desktop application for managing prison details, including prisoner addition, updating, and searching. Link	
Cryptocurrency Market Analysis <i>Python, Selenium, Tableau</i>	Oct 2023
Built a data collection and Tableau analysis workflow to explore cryptocurrency market trends. Link	
Basketball Data Graph Analysis <i>Neo4j, Cypher</i>	Jan 2025
Modeled basketball data as a Neo4j graph and used Cypher queries to analyze relationships and extract graph-based insights. Link	

STANDARDIZED TEST SCORES

IELTS	Overall Band Score: 6.5 (L: 7, R: 6, W: 6, S: 6.5)
Date Taken: 7 October 2023	

SKILLS

Languages: Python, C, C++, Java
Analysis Tools: Neo4j, GraphViz, Gephi, Matlab, LLVM (Instrumentation Tool)
Ontology Tools: Protégé
Machine Learning Packages & Technologies: PyTorch, NumPy, Pandas, LangChain, LangGraph, Keras, NLP packages (e.g., BERT, Gensim, NLTK, spaCy), Scikit-learn, Transformers, Embedding techniques (e.g., Word2Vec, FastText, GloVe), Seaborn, BeautifulSoup, Selenium.
Big Data Frameworks: Hadoop MapReduce, Apache Spark, Cassandra, Elasticsearch
Development & Software Frameworks: Android, Docker, Git, CI/CD, MLflow, Django, Flask, FastAPI
Databases: Oracle, MySQL, CQL, PostgreSQL
Scripting: L ^A T _E X, HTML, Prolog

RESEARCH, TEACHING, AND PROFESSIONAL EXPERIENCE

Database Management Lab, South Asian University | *MySQL, PL/SQL, MongoDB*

- Worked on relational and NoSQL databases including schema design, normalization, query optimization, triggers, and aggregation pipelines.

Data Mining Lab, South Asian University | *Python, Weka, Scikit-learn*

- Implemented data preprocessing, classification (SVM, k-NN, Decision Trees), clustering (K-Means, DBSCAN), text mining, web mining, and dimensionality reduction (PCA).

Network Science Lab, South Asian University | *Neo4j, Cypher*

- Taught graph theory concepts including centrality measures, community detection, network partitioning, DAGs, and shortest path algorithms using Neo4j.

Elite Lab AI | *Research Assistant*

- Conduct research on low-resource language technologies, focusing on Bengali dialects and code-switched Bengali-English speech using NLP and Automatic Speech Recognition (ASR).

MasterCourse (EdTech) | *Data Science Instructor*

- Taught Data Science and supervised projects in Computer Vision, Data Analytics, Tableau dashboards, and NLP applications.

Ahom Limited | *Blockchain Developer*

- Worked on blockchain systems focusing on consensus efficiency and transaction optimization.

HONORS AND AWARDS

Merit Scholarship at South Asian University for the fall, winter, and spring quarters.
Second runner-up in the regional Math Olympiad in 2012.
First runner-up in an intra-school debate competition.