

Marzuka Zaki Abeeda

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CAREER OBJECTIVE

Data-driven Computer Science and Engineering graduate with a passion for applying deep learning techniques to solve real-world problems. Proficient in Python, SQL, and machine learning to extract and visualize actionable insights from data. Skilled in full-stack development with expertise in the MERN stack (MongoDB, Express.js, React.js, Node.js) and Django. Possess excellent analytical, communication, and organizational skills developed through academic projects and research.

EXPERIENCE

Research Assistant

Bangladesh Computational Social Science Lab

August, 2024 - Present

- Analyzed massive text corpus containing millions of data, and visualized the results.
- Fine-tuned large language models for classifying large social media datasets and documented the results.
- Presented technical papers on AI/ML and participated in discussions regarding the current trends in research.

EDUCATION

M.Sc. in Computer Science and Engineering

BRAC University

2025 - Present

B.Sc. in Computer Science and Engineering

Rajshahi University of Engineering & Technology

2018 - 2023

PUBLICATION

Alzheimer's Disease Classification Using Parallel Deep Convolutional Neural Network

Paper

26th International Conference on Computer and Information Technology (ICCIT 2023)

2023

- Presented a study on improving Alzheimer's disease classification using a dual-path CNN architecture.
- Highlighted the advantages of this dual-path approach over traditional single-path CNN models.

PROJECTS

University Tweet Analysis | Python, PyTorch, Jupyter Notebook

[Github](#)

- Curated a labeled dataset and fine-tuned BERTweet to classify 8M university tweets over 13 years as Diversity, Equity, and Inclusion-related (DEI) or not, achieving high accuracy.
- Performed large-scale textual analysis (TF-IDF, wordclouds, hashtags) across schools, years, regions, and rankings to uncover prominent DEI themes.
- Conducted contextual and temporal analysis, revealing usage patterns (e.g., "allyship" in inclusion discourse) and identifying 2020–21 as the peak in DEI activity.

Hospitality Revenue Analytics | Excel, Power BI

[Github](#)

- Developed a business intelligence solution for Atliq Grands, a hospitality chain in India, to regain market share and revenue through data-driven insights.
- Presented revenue trends and losses per property, as well as revenue distribution by city, room class, property and hotel category. Discovered that Atliq Exotica and its Mumbai branch drives the most revenue.
- Highlighted capacity utilization trends, booking and cancellation patterns by week, and successful bookings by city and month. Found that May has the most bookings, but June suffers the highest cancellations.

Modified ADD-Net | Python, Numpy, Matplotlib, Tensorflow

[Github](#)

- Implemented a two-path convolutional neural network (CNN) architecture.
- Experimented with data augmentation and SMOTE variants for solving the class imbalance in the dataset.
- Fine-tuned the model to improve classification accuracy and compared with other existing models.

SKILLS

Languages: Python, C/C++, JavaScript, SQL, 8086 Assembly

Version Control: Git, Github

Data Analysis and Machine Learning Libraries: Numpy, Matplotlib, Pandas, Seaborn, Scikit-learn, Tensorflow, Jupyter Notebook

Business Intelligence and Spreadsheet Tools: Power BI, Microsoft Excel, Google Sheets

Databases: MySQL, MongoDB

Web Frameworks and Libraries: Django, Express.js, React.js

Process Flow Tools: Microsoft Visio, Lucidchart

Network Simulator and Circuit Design: Cisco Packet Tracer, Logisim, Multisim

System Administration & Developer Tools: VS Code, MySQL Workbench, Postman, Firebase, Linux CLI, Vercel, Netlify

Document Preparation: Overleaf

COURSES AND WORKSHOP

Complete Web Development with Jhankar Mahbub

Programming Hero

2023

Excel Fundamentals for Data Analysis

Macquarie University

2025

Power BI Data Analytics for All Levels 2.0

codebasics.io

2025

Workshop on Deep Learning Coding and Code Management

Center for Computational & Data Sciences (CCDS), IUB

2024

REFERENCES

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Rajshahi University of Engineering & Technology

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