



Md Mahfuzul Islam

Data Engineer

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EEE graduate and data engineer with experience building pandas/openpyxl, NumPy, and SciPy pipelines for large real-world datasets and performing rigorous data cleaning and quality validation. Strong in handling missing values, outliers/duplicates, date/time standardization, and numerical/scientific logic. Comfortable translating technical documents and engineering equations into reliable Python computations.

WORK EXPERIENCE AND TRAININGS

Data Engineer

Enact Business Solutions

Nov 2025 – Present | Dhaka, Bangladesh

- Built a Python (pandas/openpyxl) pipeline for Ibrahim Cardiac Hospital, processing ~70k patient records and 1M+ lab entries; standardized IDs/dates and produced a consistent, integrated dataset.
- Reconciled rows/IDs, fixed date issues, handled missing values (NaN) and outliers/duplicates, and ran end-to-end data quality checks to deliver an analysis-ready dataset (incl. mortality source integration).

Research Engineer (AI & Data Science)

AIMS Lab, IRIIC, United International University (UIU)

Nov 2024 – April 2025 | Dhaka, Bangladesh

- Developed Jotno.AI, an early-screening app for anxiety and depression, using NLP and machine learning to improve diagnostic accuracy and detect early symptoms.
- Fine-tuned Large Language Models (LLM) using clinically validated datasets and Retrieval Augmented Generation (RAG) to improve diagnostic accuracy for Susastho.AI, ensuring scalability and alignment with privacy regulations.

Industrial Trainee

Bangladesh Power Development Board (BPDB)

May 2023 | Narshingdi, Bangladesh

- Gained hands-on experience in power generation systems, including steam, gas, and combined cycle power plants, enhancing knowledge in energy production and systems optimization.

Industrial Trainee

Robi Axiata Limited

May 2023 – June 2023 | Dhaka, Bangladesh

- Acquired hands-on experience in telecommunications network management, focusing on system optimization, performance analysis, and network troubleshooting, improving network efficiency.

Industrial Trainee

Institute of Nuclear Science and Technology

June 2023 | Gazipur, Bangladesh

- Gained practical knowledge in advanced nuclear instrumentation, control systems, and electrical troubleshooting, improving technical problem-solving skills and system maintenance.

EXTRACURRICULAR ACTIVITIES

Director of Operations

Esonance 2023

March 2023 – November 2023 | Gazipur, Bangladesh

Physics, Chemistry and Mathematics Instructor

Somikkhon Academic & Admission Care

June 2020 – December 2022 | Dinajpur, Bangladesh

Vice Captain

IUT EEE Cricket Team

June 2023 – June 2024

ACHIEVEMENTS

OIC Partial Scholarship

Islamic University of Technology

2020 | Gazipur, Bangladesh

Awarded a merit-based scholarship worth 13,500 USD for academic excellence.

Champion

Higher Secondary Group, 10th Mathematical Olympiad, Dinajpur

2017

EDUCATION

B. Sc in Electrical and Electronic Engineering

Islamic University of Technology

CGPA: 3.72/4.00

2020 – 2024

Key Courses: AI & Machine Learning, Digital Electronics, Biomedical Signal Processing, Microcontroller Programming, VLSI Circuits, Power Electronics, Power Systems, Electrical Machine Design.

Higher Secondary Certificate

Dinajpur Govt. College, Dinajpur

GPA: 5.00 (General Grade Scholarship)

2019

Secondary School Certificate

Dinajpur Zilla School, Dinajpur

GPA: 5.00

2017

CORE COMPETENCIES

Machine Learning & Data Science || Python Data Processing || Research & Data Analysis || Data Quality Validation & Consistency Checks || Presentations, Collaboration & Communication || Scientific/Engineering Computation (equations → code)

TOOLS & TECH

Programming and Data Analysis: Python, C/C++, MATLAB, Scikit-learn, TensorFlow, PyTorch, Pandas, NumPy, SciPy || **Modeling & Simulation:** MATLAB & Simulink, Proteus, PSpice, Microwind, PSIM || **Documentation & Presentation:** Microsoft Office, Google Workspace, LaTeX, Canva.

COURSE CERTIFICATES

Transformer Models with PyTorch: Awarded by: DataCamp | Completed on: February 21, 2025 | Duration: 2 hours || **Working with Llama 3:** Awarded by: DataCamp | Completed on: February 23, 2025 | Duration: 4 hours

PROJECTS

Survival Analysis of Breast Cancer Patients: A Population-Based Study from SEER

Developed a machine learning model using Kaplan-Meier and Random Survival Forest to predict survival rates, achieving a C-index of 0.752 for breast cancer prediction, aiding clinical decision-making.

Time-Domain Modeling and Simulation of Performance Electric Vehicle Powertrain with Variable Battery Sizing Configurations.

Simulated electric vehicle powertrains using MATLAB and Simulink, analyzing the impact of battery size on efficiency and range. Optimized energy management by identifying the most effective battery configurations for improved performance and range.

Electrocardiogram Signal Denoising and Wiener Filtering

Implemented Wiener Filtering for ECG signal denoising, improving QRS complex detection and reducing diagnostic errors

REFERENCES

Prof. Dr. Md. Ashraful Hoque

Vice Chancellor, Ahsanullah University of Science and Technology (AUST)

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Mr. Quazi Nafees-UI-Islam

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