


MD MAHIR UDDIN

Data Scientist · Machine Learning

 mahiruddin.vercel.app
LinkedIn

 mahir.uddin.0@gmail.com
GitHub

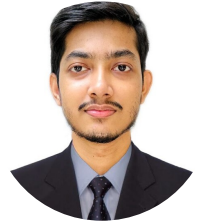
 Codeforces

 LeetCode

 +880 185 999 0434
Kaggle

 Coursera

 Dhaka, Bangladesh



ABOUT ME

I'm a Data Scientist focused on building business-driven solutions using Machine Learning, Deep Learning, and Statistics. Driven by a long-standing love for Mathematics and problem-solving, I transitioned into Data Science by pursuing an MSc in CSE (Data Science). Currently working on an ADB-funded project that uses AI and IoT to reduce water usage in textile dyeing factories. Worked on image classification, LLM fine-tuning, and RAG, with ongoing research in developing a density-based clustering algorithm and modification of ADAM optimizer for reduced oscillation and faster convergence.

SKILLS

- **Machine Learning & AI:** Machine Learning, Deep Learning, Computer Vision, Generative AI
- **Programming Languages:** Python, SQL, C, C++, JavaScript
- **Libraries & Frameworks:** NumPy, Pandas, Matplotlib, Seaborn, Scikit-Learn, TensorFlow, PyTorch, LangChain
- **Others:** Git, Linux, HTML, CSS, MS Excel, LaTeX
- **Foundational Knowledge:** Big Data, Cloud Computing, Data Engineering, IoT

PROJECTS

LLM Fine-Tuning with RAG for Investment Guidance

LLM, LangChain, Vector DB, RAG



- Fine-tuned a domain-specific LLM and integrated Retrieval-Augmented Generation to deliver context-aware investment insights.
- Combined model fine-tuning with dynamic retrieval from books, annual reports, and financial articles from the web.

Smart EV Charging Scheduler for Self-driving Vehicles

MiniZinc, Constraint Programming, Optimization



- Designed a constraint-based scheduler to optimize EV charging assignments under real-world operational constraints.
- Minimizes total travel distance while producing conflict-free charging schedules for real-time EV fleet operations.

Stock Market Trend Prediction using ANFIS

ANFIS, PyTorch, Scikit-learn



- Implemented an Adaptive Neuro-Fuzzy Inference System (ANFIS) to automatically learn indicator patterns that signal stock price uptrends.
- Achieved 76.8% accuracy in predicting price trend of the next day.

Uber Fare Prediction with Data Cleaning & EDA

EDA, Statistics, Pandas, Matplotlib



- Performed data cleaning and EDA to identify key factors influencing fare.
- Built and evaluated regularized regression models with statistical validation.

More projects: mahiruddin.vercel.app/projects

ACHIEVEMENTS

- Codeforces max rating **1270**; ranked **773rd** among **20,449** Bangladeshi coders (**Top 3.8%**).
- **Finalist**, International Youth Mathematics Challenge (IYMC) 2025.
- Ranked **14th nationwide** in BUTEX A Unit 2018 admission exam among **13,000+** candidates.
- Ranked **9th nationwide** in Jahangirnagar University H Unit 2018 admission exam among **34,000+** candidates.

RESEARCH

Research works completed as part of coursework and independent study (unpublished; publishable work not included).

Fabric Defect Detection Using Histogram Equalization and CNN

Computer Vision, CNN

Paper 

- Developed a vision-based textile defect detection system combining contrast enhancement with CNNs.
- Improved defect visibility and classification robustness under varying fabric textures and lighting conditions.

Automated Density-Based Splitting of Merged Clusters

Clustering, Unsupervised Learning

Paper 

- Proposed a clustering refinement framework to detect and split incorrectly merged clusters using density analysis
- Designed a recursive splitting mechanism to dynamically adjust cluster structure without pre-defined k .

Intelligent Irrigation Decision Support System Using IoT and Weather Data

IoT, Data Analytics

Paper 

- Built a data-driven decision support system integrating IoT sensor data with weather information.
- Optimized irrigation planning to reduce water consumption and enhance resource efficiency, with motor operation time and duration controlled via IoT microcontrollers.

EDUCATION

M.Sc. in Computer Science & Engineering

United International University

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Nov 2024–Present

📍 Dhaka, Bangladesh
- Major: Data Science
 - CGPA: 3.78

B.Sc. in Textile Engineering

Bangladesh University of Textiles (BUTEX)

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Jan 2018–Oct 2023

📍 Dhaka, Bangladesh
- Specialization: Wet Processing Engineering
 - CGPA: 3.34

Higher Secondary Certificate (HSC), Science

B.A.F. Shaheen College

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2017

📍 Chattogram, Bangladesh
- Science
 - GPA: 4.75

Secondary School Certificate (SSC), Science

Govt. Muslim High School

- 📅

2015

📍 Chattogram, Bangladesh
- Science
 - GPA: 5.00

CERTIFICATIONS

- Machine Learning Specialization
Stanford · Coursera [Credentials](#) [🔗](#)
- Deep Learning Specialization
DeepLearning.AI · Coursera [Credentials](#) [🔗](#)
- IBM Generative AI Engineering Professional Certificate
IBM · Coursera [Credentials](#) [🔗](#)
- Mathematics for Machine Learning and Data Science
DeepLearning.AI · Coursera [Credentials](#) [🔗](#)

EXPERIENCE

Research Engineer (Part-time)

ADB-Funded AI & IoT Project

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Jan 2026 – Present

Dhaka, Bangladesh

Executive (Full-time)

Epyllion Group

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May 2024 – Jul 2024 (3 months)

Gazipur, Bangladesh

Management Trainee Officer (Full-time)

Epyllion Group

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Nov 2023 – Apr 2024 (6 months)

Gazipur, Bangladesh

Mathematics & Physics Lecturer

(Part-time)

Sunrise Coaching Centre

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Aug 2018 – Sep 2022 (4 yrs 2 months)

Dhaka, Bangladesh

Mathematics Lecturer (Seasonal)

UCC (University Coaching Center)

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Apr 2019 – Aug 2022 (3 yrs 5 months)

Dhaka, Bangladesh

INTERESTS

- Mathematics
 - Economics
 - Geopolitics
 - Investing
 - Cycling
- Chess
 - Sudoku
 - Rubik's Cube
 - Cricket
 - Traveling