

MD MAHIR UDDIN

Data Scientist • Machine Learning

 [mahiruddin.vercel.app](https://www.linkedin.com/in/mahiruddin.vercel.app/)
LinkedIn

 GitHub

 @ mahir.uddin.0@gmail.com
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 predefined 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

⌚ Nov 2024–Present

📍 Dhaka, Bangladesh

- Major: Data Science
- CGPA: 3.78

B.Sc. in Textile Engineering

Bangladesh University of Textiles (BUTEX)

⌚ Jan 2018–Oct 2023

📍 Dhaka, Bangladesh

- Specialization: Wet Processing Engineering
- CGPA: 3.34

Higher Secondary Certificate (HSC), Science

B.A.F. Shaheen College

⌚ 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

⌚ Jan 2026 – Present

📍 Dhaka, Bangladesh

Executive (*Full-time*)

Epyllion Group

⌚ May 2024 – Jul 2024 (3 months)

📍 Gazipur, Bangladesh

Management Trainee Officer (*Full-time*)

Epyllion Group

⌚ Nov 2023 – Apr 2024 (6 months)

📍 Gazipur, Bangladesh

Mathematics & Physics Lecturer (*Part-time*)

Sunrise Coaching Centre

⌚ Aug 2018 – Sep 2022 (4 yrs 2 months)

📍 Dhaka, Bangladesh

Mathematics Lecturer (*Seasonal*)

UCC (University Coaching Center)

⌚ Apr 2019 – Aug 2022 (3 yrs 5 months)

📍 Dhaka, Bangladesh

INTERESTS

• Mathematics

• Chess

• Economics

• Sudoku

• Geopolitics

• Rubik's Cube

• Investing

• Cricket

• Cycling

• Traveling