

T. M. Mehrab Hasan

IoT ENGINEER · ROBOTICS ENGINEER · WEB DEVELOPER · PYTHON DEVELOPER

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Summary

With a passion for IoT & Robotics Engineering and Web Development, I aim to leverage my skills to create intelligent, connected systems and dynamic digital solutions for real-world challenges. My focus is on integrating advanced IoT technologies with seamless web platforms to enhance efficiency, connectivity, and user experience. Committed to continuous learning and creative problem-solving, I seek to contribute meaningfully to both industry and society by developing technology-driven solutions.

Education

Gazipur Digital University

B. SC. ENGG. (IoT & ROBOTICS ENGINEERING)

- Earned the Bachelors Degree with a CGPA of 3.71 out of 4.00 in "IoT & Robotics Engineering" field.

Kaliakair, Gazipur, Bangladesh

Jan. 2020 - Jan. 2025

Notre Dame College

HIGHER SECONDARY CERTIFICATE

- Earned the H.S.C certificate with a GPA of 5.00 in "Science" background.

Dhaka, Bangladesh

Jun. 2017 - May. 2019

Monipur High School & College

SECONDARY SCHOOL CERTIFICATE

- Earned the S.S.C certificate with a GPA of 5.00 in "Science" background.

Dhaka, Bangladesh

Jan. 2007 - May. 2017

Skills

- Programming language:** C, C++, Python (Django), HTML, CSS, JS, PHP, Jupyter Notebook, React JS.
- Database:** MySQL, SQLite, MongoDB, Firebase.
- Operating System:** Windows, Linux (Intermediate Level).
- Application Software:** MS Word, MS PowerPoint, MS Excel, Arduino IDE, Netbeans IDE, Anaconda, Android Studio.

Work Experience

Perpex

DJANGO (PYTHON) INTERN

- Designed and optimized relational database models, queries, and migrations for scalable performance.
- Integrated RESTful APIs and third-party services to support real-time data communication.
- Implemented authentication, authorization, and security best practices to safeguard user data.

India

July 2025 - Curent

Robo Tech Valley

ROBOTICS & EMBEDDED SYSTEM ENGINEER

- Designed, developed, and maintained various robotics projects and courses.
- Optimized robotic projects performance, security, and accessibility for improved functionality.
- Integrated sensors, microcontrollers, firebase databases and APIs to support web-based and real-time functionalities.

Dhaka, Bangladesh

May 2025 - August 2025

Greenity Foundation, Bangladesh

LEAD WEB DEVELOPER

- Designed, developed, and maintained the foundation's website platforms for seamless user experiences.
- Led a team of developers in implementing responsive and dynamic web applications.
- Integrated backend databases and APIs to support web-based functionalities.

Dhaka, Bangladesh

Jan. 2022 - Feb. 2023

Projects

Early Stage Fire Detection Robot

A MINI AUTONOMOUS ROBOT TO DETECT OBJECTS, FIRES AND TAKE NECESSARY FOLLOWUP MEASURES.

- Built an autonomous robot for fire detection with an automated water sprinkler supporting wireless control and real-time fire alerts.

IoT, Robotics, Wireless

57th International ducation Expo. 2023

A Smart IoT Solution for Managing Drainage Congestion in Bangladesh

A SYSTEM COMPRISES OF BOTH IoT AND ML THAT DETECTS THE GARBAGE, SORTS IT, ENSURES AUTOMATIC WATER-FLOW.

- Designed an IoT-based system for garbage detection using ML with automated water-flow control, and real-time monitoring with an alert system.

IoT, ML, Mobile App

May. 2024

Intelligent Investment Advisor: A Stacked ML Based Recommendation System with Explainable Insights

ML, DL, Explainable AI

A ML, DL AND EXPLAINABLE AI BASED RESEARCH TO RECOMMEND SUITABLE INVESTMENT SECTOR AS PER USER’S INFORMATION.

Dec. 2024

- Developed a Stacked ML-based system for investment recommendations and provided clear reasoning with Explainable AI.

Achievements

2025	Dean’s Certificate & Selection in Dean’s List (Two Semesters),	Awarded by Gazipur Digital University	June 29
2024	Advance Cybersecurity Program Certificate,	Awarded by Team Matrix Elite Hackers	March 15
2023	21st Century Employability Skilling (Advanced) Certificate,	Awarded by Wadhwani Foundation	December 06
2023	Cyber Security Training Certificate,	Awarded by Cretive IT Institute	October 18
2023	21st Century Core Employability Skills Development Certificate,	Awarded by Wadhwani Foundation	October 17
2023	Introduction to Cloud Certificate,	Awarded by AWS Academy	August 16
2023	3rd Runner Up,	Upazila Science Fair, Chandra, Gazipur	May 7

Publications

Intelligent Investment Advisor: A Stacked ML-Based Investment Sector Recommendations with Explainable Insights

Elsevier, 2025

JOURNAL PAPER (UNDER REVIEW)

July 2025

- Proposed a stacked ensemble-based ML & DL framework for personalized investment sector recommendations while integrating explainable AI techniques to enhance transparency and user trust..

Towards Cleaner Cities: A Smart IoT Solution for Managing Drainage Congestion in Bangladesh

11th NSysS 2024

CONFERENCE PAPER

Dec. 2024

- Develoed an IoT-based smart drainage system for real-time garbage detection, water level monitoring, and automated flow control with alerts via a web and mobile platform.

Extracurricular Activity

GDU Robotics Club

Gazipur Digital University

DEPUTY ORGANIZING SECRETARY

May. 2023 - Dec. 2024

- Assisted in planning, coordinating robotics events and workshops, while managing team logistics for smooth execution.

GDU Programming Club

Gazipur Digital University

EXECUTIVE SECRETARY

March. 2023 - May. 2024

- Led coding competitions, while coordinating with team members to organize regular coding sessions and webinars.

GDU Cultural Club

Gazipur Digital University

PROGRAM SECRETARY

Jan. 2023 - Dec. 2024

- Organized and managed cultural events, facilitating collaboration between student groups for successful execution.

GDU Language Club

Gazipur Digital University

KOREAN LANGUAGE SECRETARY

Jul. 2023 - Dec. 2024

- Managed communication and coordinated activities between club members and external partners and organized learning sessions.

References

FARZANA AKTER

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Declaration

I, hereby, declare that all information I have presented so far is true to my knowledge. If required and where applicable, this document can be supported by authentic certificates/papers.