

Md Hridoy Ahmed

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[Portfolio](#) • [LinkedIn](#) • [GitHub](#)

Profile

AI/ML Engineer and **Researcher** focused on developing intelligent systems in **Machine Learning, Deep Learning, Computer Vision, and IoT**, with a special emphasis on medical image processing. Also, a **Full Stack Web Developer** skilled in **Django** and **Django REST Framework**, experienced in building scalable applications, developing RESTful APIs, and integrating **AI solutions** into real-world platforms.

Technical Skills

Programming Languages: C, Python, Java, PHP, SQL

AI/ML & Data Science

- **Core Concepts:** Machine Learning, Deep Learning, Computer Vision, LLMs, RAG
- **Libraries & Frameworks:** NumPy, Pandas, PyTorch, Scikit-learn, OpenCV, Hugging Face Transformers, LangChain, LangGraph,

Web Development

- **Backend Development:** Django, Django REST Framework
- **Frontend Development:** HTML, CSS, JavaScript, React

Databases: MySQL, PostgreSQL

Tools & Platforms: Git, GitHub, VS Code, Jupyter Notebook, Google Colab, AWS

Education

B.Sc. in Computer Science and Engineering (CSE) | Daffodil International University
CGPA: 3.68

2022 – 2026

Higher Secondary Certificate (HSC) | Kushtia Govt Central College
GPA: 5.00

2019 – 2021

Secondary School Certificate (SSC) | Khashmathurapur Secondary School
GPA: 5.00

2013 – 2019

Works & Experience

Trainee Technology Specialist | Betopia Limited

Feb, 2026 – May, 2026

- Gaining hands-on knowledge in **Networking & IT Infrastructure, Cloud, and Cybersecurity**.
- Working on **Web and AI Development** projects in a professional environment.
- Contributing to **Business Analysis** and technology-driven solutions.

Publications

Research Assistant | Daffodil International University

2023 - Present

- “**EdgeVision-LPR: A Quantized Deep Learning Framework for Adaptive Real-Time License Plate Recognition**” – IDAA 2025
- “Development of a Cloud-Integrated IoT Smart Attendance System Using ESP32 Edge Devices” – IEEE QPAIN 2026
- “Design and Implementation of a Smart Agricultural Robot with Autonomous Navigation” – IEEE QPAIN 2026

Projects

Personal & Academic Projects

IELTS Speaking Agent | Python, LangChain, LangGraph, FastAPI, LLM

- Built an AI-powered IELTS speaking practice agent using LangGraph and LLMs to simulate examiner-style conversations.
- Implemented real-time feedback generation on fluency, coherence, and vocabulary using RAG-based retrieval.

Blood Management System | Python, Django, Django REST Framework, PostgreSQL

- Developed a blood donation management platform connecting donors, recipients, and blood banks with real-time availability tracking.
- Built RESTful APIs with Django REST Framework for donor registration, blood group search, and request management with secure authentication.

Industry Projects — Betopia Limited

Smart LMS (Learning Management System) / Next.js (App Router), TypeScript, Laravel, PostgreSQL | Betopia Limited

- Built a full-stack learning management platform with course management, student enrollment, and progress tracking.
- Implemented a Laravel REST API backend with JWT authentication and a Next.js (App Router) TypeScript frontend for a seamless user experience.

Agriculture Management System / Next.js (App Router), TypeScript, Laravel, PostgreSQL | Betopia Limited

- Created a full-stack agriculture management platform for tracking crops, resources, and farm operations with real-time dashboards.
- Designed a Laravel REST API backend with JWT-based authentication and a Next.js TypeScript frontend for intuitive data visualization.

Building Society Management System / Next.js (App Router), TypeScript, Laravel, PostgreSQL | Betopia Limited

- Developed a society management platform for handling residents, maintenance requests, and payment records.
- Built a token-based authenticated REST API with Laravel and a responsive Next.js TypeScript frontend with automated billing and notifications.

Restaurant Management System / Next.js (App Router), TypeScript, Laravel, PostgreSQL | Betopia Limited

- Built a restaurant management solution covering menu management, order processing, and table reservations.
- Implemented a Laravel REST API with JWT authentication and a Next.js TypeScript frontend with real-time order status updates.

Hospital Management System / Next.js (App Router), TypeScript, Laravel, PostgreSQL | Betopia Limited

- Built a comprehensive hospital management system handling patient records, appointments, and doctor scheduling.
- Implemented role-based access control for admins, doctors, and patients with secure authentication.

Extra-Curricular Activities

Executive Member CPC, Daffodil International University	2022 - 2026
• Participated in UTA Fall 2023 Algorithm Contest and Take-Off Spring 2024 Programming Contest. • Attended Machine Learning Research Workshop and organized competitive coding events.	
Executive Member DS Club, Daffodil International University	2022 -2026
• Participated in the <i>Data Visionary: National Data Analytics Competition</i> organized by the Department of Computer Science and Engineering, Daffodil International University on April 12, 2025. • Engaged in a highly competitive environment, applying data analysis and problem-solving skills to real-world challenges.	

Language

Bangla (Native)
English (Fluent)