Md Rafi Hossain

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Professional Summary

Computer Science student specializing in data structures, algorithms, machine learning, artificial intelligence, and problem-solving. Experienced with C++, Python, Java, and JavaScript. Proven ability to lead academic projects and research initiatives, with a strong interest in real-time computer vision and language technologies.

Work Experience

- **Machine Learning Intern**   July 2025–Sept. 2025
  Robo Tech Valley
  Dhaka, Bangladesh

- **Machine Learning Intern**   Oct. 2025–Present
  Future Interns
  Remote, India

Education

- **B.Sc. in Computer Science and Engineering**   Oct 2021–Sept. 2025
  Green University of Bangladesh   **CGPA: 3.58 / 4.00**

- **H.S.C. (Higher Secondary Certificate)**   Jun 2017–Jul 2019
  Monipur College   **GPA: 4.17 / 5.00**

- **S.S.C. (Secondary School Certificate)**   Jan 2015–Jun 2017
  Agargaon Taltala Govt. Colony High School   **GPA: 4.68 / 5.00**

Technical Skills

- **Programming:** C++, Python, Java, JavaScript
- **Core CS Concepts:** Data Structures & Algorithms, Object-Oriented Programming
- **Web Technologies:** HTML, CSS
- **Machine Learning:** NLP, Computer Vision
- **Databases/OS:** MySQL, Windows, Linux
- **Libraries/Frameworks:** Langchain, FastApi, Hugging face, Pandas, Numpy, OpenCV, Matplotlib, Sci-kit learn, Tensorflow, Pydantic, seaborn
- **Tools:** Docker, n8n, Git, LaTeX, GitHub Copilot, Cursor AI, Kaggle
- **Soft Skills:** Problem Solving, Critical thinking, Adaptability, Communication
- **Languages Proficiency:** English (Fluent), Bangla (Native)

Technical Projects

- **Voice Assistant with AI/ML:** Designing a voice-controlled assistant using Python, Google speech recognition, Hugging Face BERT classifier and NLP libraries to automate desktop operations.

- **RestAPI AI Chatbot:** Designed a RESTful chatbot using FastAPI and Groq LLaMA, integrated with LangChain tools for intelligent product data retrieval and natural language responses.

- **LLM Powered PDF Processing and Local Rag:** Designed a process of extracting information from PDF's(Both digital and scanned) using LLM capabilities, and local rag system using Langchain with local models of Ollama.

- **Multilingual RAG System:** Designed a simple retrieval-augmented generation pipeline using transformer embeddings, ChromaDB, and Hugging Face models to retrieve information from PDFs and generate grounded answers in Bangla and English.

- **Intent-Based Chatbot (Python, ML)**: Built a chatbot that classifies user intents using a neural network trained on JSON data, with NLP preprocessing and TensorFlow-based model deployment.

- **Flappy Bird (Java):** Developed a desktop version of Flappy Bird, featuring dynamic physics and score tracking.

- **Tic Tac Toe (Java):** Developed a desktop-based two-player Tic Tac Toe game with intuitive UI and logic-based win condition tracking.

Research Work

- **Real-time Computer Vision-Based Deep Neural Network Model for Continuous Bangla Sign Language Gesture Recognition Using Multiple Linguistic Features Analysis.**

- **A Critical Review of Methods, Applications and Perspectives of Bangla Sign Language.**

- **Multi-Label Toxic Comment Classification with Transformer-Based NLP Models.**

Achievements

- **Dean's Award**, Green University of Bangladesh – 3rd
Semester Awarded for academic performance.

- **Vice Chancellor's Award**, Green University of Bangladesh –
4th Semester Recognized for academic excellence.

References

- **Dr. Muhammad Aminur Rahman**
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Department of Computer Science & Engineering
Bangladesh University of Business and Technology
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