

RATNAJIT DHAR

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Chittagong - Bangladesh

SUMMARY

I am an undergraduate student in Computer Science & Engineering with a passion for continuous learning. As a competitive programmer, I've enhanced my logical and critical thinking skills. Currently, I'm focusing on Data Science & Machine Learning, aiming to contribute through innovative projects. My experience with various organizations has strengthened my leadership and organizational abilities, ensuring efficient task coordination and goal achievement.

EXPERIENCE

- **Green Lead** June 2024 - Present
Tech Solutions Architect Remote
 - Worked on a project named Re-Energized Bangladesh on the Climate Intelligence Technology Team which involves creating a renewable energy dashboard in Excel for Bangladesh.
 - Currently developing a climate based chatbot using RAG.

EDUCATION

- **Chittagong University of Engineering & Technology** March 2022 - Present
BSc. in Computer Science & Engineering
 - GPA: 3.83/4.00 (Till 6 semesters)

SKILLS

- **Programming Languages:** Python, C, C++
- **Database Systems:** MySQL, Firebase
- **Frameworks & Libraries:** PyTorch, FastAPI, Flask, Streamlit, LangChain
- **Tools:** Github, Latex

PROJECTS

- **Spam Classification with MLOps**
Tools: Python, MLFlow, DVC
 - Built a spam classification system using machine learning with a complete MLOps workflow.
 - Implemented data ingestion, preprocessing, feature extraction and model training & evaluation.
 - Leveraged DVC data and pipeline versioning to ensure reproducibility and efficient collaboration.
 - Enabled experiment tracking and model version control to support scalable development and deployment using MLFlow
- **CGPA Calculator For CUET Students**
Tools: Flask, Pandas, HTML, CSS, Google Colab
 - Developed a web application to automate CGPA calculation for CUET students.
 - Implemented a user-friendly interface allowing users to copy and paste grades for instant calculation.
 - Utilized Flask for backend development, ensuring smooth data processing.
- **Resume Screening App**
Tools: Streamlit, Jupyter Notebook, Numpy, Pandas, Scikit-learn, Matplotlib, Seaborn, Pickle, PyPDF2
 - Developed an automated resume screening system to optimize the recruitment process.
 - Implemented Natural Language Processing (NLP) techniques to analyze resumes, achieving improved categorization accuracy.
 - Created a user-friendly interface using Streamlit, ensuring ease of use for HR professionals.
 - Applied machine learning algorithms to predict suitable candidate categories based on resume content.
- **Customer Churn Prediction**
Tools: Jupyter Notebook, Flask, Pandas, Scikit-learn, Matplotlib, Seaborn, Pickle, PyPDF2
 - Developed a predictive model to identify customer churn using ensemble machine learning techniques.
 - Leveraged Random Forest, XGBoost, and LightGBM to enhance prediction accuracy.
 - Implemented a Flask application for user-friendly model interaction and visualization.
- **Calories Burnt Prediction**
Tools: Jupyter Notebook, FastAPI, Pandas, Scikit-learn, Seaborn, Pickle, HTML, CSS

- Developed a machine learning model to predict calories burned during physical activities.
- Achieved an R2 Score of 0.998 using XGBoost Regressor for high prediction accuracy.
- Created a FastAPI application for real-time predictions and user interaction.

• Handwritten Digit Recognition

Tools: Streamlit, TensorFlow, Keras

- Developed a Streamlit app to recognize handwritten digits using the MNIST dataset.
- Implemented TensorFlow and Keras for building and training the recognition model.
- Created an interactive canvas for users to draw digits and receive predictions.

• CUET Thesis & Project Portal

Tools: Firebase

- Managed backend development for a centralized repository of student theses and projects.
- Utilized Firebase for data storage and user authentication.
- Designed the architecture to ensure easy access and sharing of academic work.

• HR Analytics Dashboard using PowerBI

Tools: Power BI, Excel

- Developed an HR analytics dashboard to analyze employee attrition factors.
- Leveraged key HR metrics to provide insights into salary, job satisfaction, and demographics.
- Created visualizations to facilitate data-driven decision-making for HR management.

• TuitionEase

Tools: HTML, CSS, JavaScript, PHP, MySQL

- Developed a comprehensive platform for effective tuition administration.
- Designed user interfaces and managed backend functionalities to resolve scheduling conflicts.
- Implemented database management using MySQL for efficient data handling.

• Zenspace - Meditation Based Software

Tools: Java, MySQL

- Developed a Java-based meditation application providing a serene digital environment.
- Created an intuitive user interface using Java Swing for easy navigation.
- Implemented features for diverse meditation sessions and secure donation processing.

PUBLICATIONS

C=CONFERENCE, J=JOURNAL, S=IN SUBMISSION, T=THESIS

- [C.2] **CUET-823@DravidianLangTech 2025: Shared Task on Multimodal Misogyny Meme Detection in Tamil Language.** In *Proceedings of the Fifth Workshop on Speech, Vision, and Language Technologies for Dravidian Languages* <https://aclanthology.org/2025.dravidianlangtech-1.57/>
- [C.1] **Short-Term Wind Speed Forecasting Using Different LSTM Deep Learning Methods.** In *Innovations in Electrical and Electronics Engineering. ICEEE 2024, Lecture Notes in Electrical Engineering*, vol 1295. Springer, Singapore. https://doi.org/10.1007/978-981-97-9112-5_12

CERTIFICATIONS

- **Supervised Machine Learning: Regression and Classification** - Coursera-Stanford University March 2024
- **Advanced Learning Algorithm** - Coursera-Stanford University June 2024
- **ICPC Asia Dhaka Regional Contest 2024** - ICPC Foundation December 2024
- **Data Science Methodology** - IBM Developer Skills Network March 2025

AWARDS & ACHIEVEMENTS

- **1st Runner-up** — Intra CUET ML Contest - IEEE CS CUET Student Branch Chapter 2025
- **4th Place** — Shared Task on Misogyny Meme Detection - DravidianLangTech@NAACL 2025
- **Honorable Mention** — ICPC Asia Dhaka Regional Contest 2024
- **Academic Scholarship x 6** — Chittagong University of Engineering & Technology 2022-2025

LEADERSHIP EXPERIENCE

- **Chair** July 2025 - Present
IEEE Computer Society CUET Student Branch Chapter
- **Joint Organizing Secretary** July 2025 - Present
CUET Computer Club
- **General Secretary** August 2017 - August 2018
Collegiates Cultural Club
- **Head of Finance** January 2025 - February 2025
Hult Prize @ CUET
- **Vice President(Cultural)** January 2025 - Present
Puja Udjapan Parishad, CUET
- **Assistant Manager - Public Relations** August 2021 - October 2022
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VOLUNTEER EXPERIENCE

- **Organizing Committee**
Smarok 20 - Govt. Hazi Muhammad Mohsin College Rag Day Event
- **Organizing Committee - Assistant Secretary of Event Managament**
Badhanhara 4.0 - Inter Departmental Cultural Competition by Joyoddhoney, CUET
- **Organizing Committee - Secretary of Finance**
Badhanhara 5.0 - Inter Departmental Cultural Competition by Joyoddhoney, CUET
- **Organizing Committee**
Boishakhi Adda - Bengali New Year Celebration by Collegiates Cultural Club
- **Organizing Committee**
Chittagong Collegiate School Batch 18 Rag Day Event
- **Student Volunteer**
Chittagong Collegiate School 180th year Celebration
- **Organizing Committee - Under Secretary General of Branding & Promotion**
Chittagong Collegiate School Model United Nations