

# RAIHAN UDDIN

M.Sc. in Computer Science  
Ramakrishna Mission Vivekananda Educational and Research Institute, Belur Math, West Bengal, India

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## PROJECTS

### MedXpert: Medical Visual QA & Diagnosis Assistant    Jan 2025 - May 2025

- Designed AI system for medical diagnosis using visual-language retrieval and automated report generation
- Fine-tuned CLIP model on MIMIC-CXR dataset and integrated BLIP with Gemini LLM for structured reports

Tools: Python, PyTorch, OpenAI CLIP, BLIP, Gemini LLM, Streamlit | Faculty: Mr. Champak Dutta

GitHub: [Click here](#)

### ChatGPT Clone with DeepSeek R1 & RAG-Powered PDF Q&A    Jan 2025 - May 2025

- Developed ChatGPT-like AI Assistant using DeepSeek R1 with RAG for document-based Q&A
- Enabled PDF uploads with FAISS vector search and implemented persistent chat memory using MySQL

Tools: Python, Streamlit, FastAPI, DeepSeek R1, FAISS, MySQL | Faculty: Mr. Champak Dutta

GitHub: [Click here](#)

### Classification-Based Approach for Predicting Smartphone Price Categories    Aug 2024 - Nov 2024

- Built machine learning model to classify smartphones into price segments using multiple algorithms
- Analyzed key features influencing pricing and compared classification techniques for optimization

Tools: Python, scikit-learn, pandas, numpy, matplotlib | Faculty: Dr. Rudra Banerjee, RKMVERI

GitHub: [Click here](#)

### Wavelet-Based Approach for Authenticating Medical Images & Extracting Patient Info    Jan 2024 - Apr 2024

- Designed digital watermarking system to protect medical image integrity and ensure authenticity
- Applied DWT, Histogram Shifting, and Arnold's Cat Map to embed hidden watermarks seamlessly

Tools: Python, OpenCV | Faculty: Dr. Sudip Sanyal, RKMRC

GitHub: [Click here](#)

## COURSEWORK

- Machine Learning
- Computer Vision
- Deep Learning and NLP
- Advanced Algorithm
- LLM
- Linear Algebra
- Theory of Computation
- Probability and Stochastic Process
- Statistics-I
- Computational Geometry
- Spectral Graph Theory
- Universal Human Values

## ACHIEVEMENTS

- Secured AIR 2 in MPST Entrance Exam 2024, conducted by the Indian Association for the Cultivation of Science (IACS).

## EDUCATION

- Ramakrishna Mission Vivekananda Educational and Research Institute, Howrah

M.Sc in Computer Science

2024 – Present

- Ramakrishna Mission Residential College (Autonomous), Narendrapur, Kolkata

B.Sc in Computer Science

2021 – 2024    CGPA: 8.30

- Mohisda Ramnarayan High School, Paschim Medinipur, West Bengal

Higher Secondary

2019 – 2021    Score: 86%

## TECHNICAL SKILLS

- Programming Languages: C, C++, Python, Java, SQL
- Python Libraries: NumPy, Pandas, Matplotlib, Seaborn, OpenCV, Flask
- Web Development: HTML, CSS, JavaScript
- Tools: Git, GitHub
- Operating Systems: Windows, Linux (Ubuntu)

## LEADERSHIP POSITIONS

- Instructor at Envision, RKMRC    Feb 2024  
Guided tech activities during the college tech fest.
- Organizer for Perceptron, RKMVERI    Jan 2025  
Assisted in organizing and managing events during the tech fest.

## HOBBIES

- Playing cricket, watching movies, photography