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: A Multimodal Diagnosis Assistant for Radiology**
Jan 2025 – May 2025
Tools: Huggingface, pytorch, Streamlit   [GitHub ↗] [Live Demo ↗]
- Fine-tuned CLIP model on MIMIC-CXR dataset and integrated BLIP with Gemini LLM for structured medical reports
- Obtained 89% accuracy in chest-X-ray image–report alignment by fine-tuning a CLIP with comprehensive medical report generation capability
- Supervised by **Mr. Champak Dutta**

➤ **ChatGPT Clone with DeepSeek R1 & RAG-Powered PDF Q&A**
Jan 2025 - May 2025
Tools: Streamlit, DeepSeek R1, FAISS, PostgreSQL
[GitHub ↗] [Live Demo ↗]
- Developed ChatGPT-like AI Assistant using DeepSeek R1 with RAG for document-based Q&A functionality
- Enabled PDF uploads with FAISS vector search and implemented persistent chat memory using PostgreSQL
- Supervised by **Mr. Champak Dutta**

➤ **Classification-Based Approach for Predicting Smartphone Price Categories**
Aug 2024 – Nov 2024
Tools: scikit-learn, pandas, numpy, matplotlib   [GitHub ↗]
- Built machine learning models to classify smartphones into price segments using multiple algorithms
- Achieved best results with SVM (95.20% test accuracy), Logistic Regression (94.95%), and XGBoost (91.92%)
- Supervised by **Br. Tamal Mj**

➤ **Wavelet-Based Approach for Authenticating Medical Images & Extracting Patient Info**
Jan 2024 – Apr 2024
Tools: Python, OpenCV   [GitHub ↗]
- Designed robust digital watermarking system using DWT, Histogram Shifting, and Arnold's Cat Map
- Achieved high fidelity with average PSNR of **68 dB** and SSIM of **0.98** for extracted watermarks
- Supervised by **Prof. Bibek Ranjan Ghosh**

COURSEWORK

- Machine Learning
- Computer Vision
- Deep Learning and NLP
- Advanced Algorithms
- Large Language Models
- Theory of Computation
- Probability
- Linear Algebra
- Statistics-I
- Computational Geometry
- Spectral Graph Theory

ACHIEVEMENTS

- **GATE 2025 Qualified** in Computer Science & Information Technology, conducted by IIT Roorkee
- 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: 85.6%

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, love going to the gym, watching movies