RAIHAN UDDIN

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

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PROJECTS

➢ **ShopLens: AI-powered shopping assistant app**
Jan 2025 – May 2025
Tools: Huggingface,Streamlit, OpenCV, PyTorch,YOLO [GitHub]

- Fine-tuned YOLOs model for precise detection of various clothing categories in user-uploaded images.
- Integrated Fashion-CLIP model for image-to-text matching, enabling accurate recognition and description of fashion items.
- Developed a Streamlit-based chatbot interface with image upload functionality for interactive user experience and real-time fashion analysis.
- Supervised by **Br. Tamal Mj**

➢ **ChatGPT Clone with DeepSeek R1 & RAG-Powered PDF Q&A**
Jan 2025 - May 2025
Tools: Streamlit,DeepSeek R1, FAISS, PostgreSQL [GitHub]

- 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 **Prof. 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
- Working out at the gym
- Watching movies