RUHIT SHAH

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Technical Skills

- **Languages:** C/C++, SQL, Python, MATLAB, HTML, CSS
- **Data Science Tools:** Numpy, Pandas, Matplotlib
- **Data Analysis and Visualization Tools:** Power BI, Tableau, Matplotlib, Seaborn, Excel
- **Machine Learning Libraries:** TensorFlow, Scikit-learn, Keras, Pytorch, NLTK
- **Databases:** MongoDB, MySQL
- **Tools & Platforms:** Git, GitHub, Docker

Projects

1. YOLOv8-Based Real-Time Object Recognition System (Github)

- Utilizes the YOLOv8-nano model to detect and label objects from a live webcam stream
- Displays annotated video frames in real time with bounding boxes and class labels.

2. 3D Point Cloud Registration and Alignment Using Open3D (Github)

- Implemented and compared multiple state-of-the-art 3D point cloud registration algorithms — including ICP, Fast Global Registration, and RANSAC-based methods — with adaptive voxel downsampling and ICP refinement, achieving robust alignment and quantitative error evaluation against reference imagery.

3. Bangla RAG System (Github)

- Developed an OCR-enhanced retrieval-augmented generation system for Bengali question answering using FAISS vector search and large language models.

4. Simple Keyword-Based Chatbot (Github)

- Designed a Python chatbot that responds to user queries through keyword matching and rule-based responses.

5. Harry Potter Book Search (Github)

- Created a PyQt5 desktop application to search and explore the Harry Potter book series using keyword-based queries.

Work Experience

AI Engineer(Intern)   December 2024 - May 2025
Centre for Data Science Research(CDSR)

Publication

- Patch Antenna Design and Optimization Using Machine Learning Techniques (**Link**)

Education

Patuakhali Science and Technology University   January 2019 - December 2024
B.Sc. in Computer Science and Engineering   *GPA: 3.476/4.0*

- Relevant Coursework: Machine Learning, Artificial Intelligence, Algorithm Engineering, Data Warehousing and Mining, Data Structures & Algorithms, Operating Systems, Database Management, Computer Networks, Software Engineering, Web Development

Honours and Awards

- Dean's Merit List – Faculty of Computer Science and Engineering, Patuakhali Science and Technology University
- 24th Position in MIST LeetCon HackMeIfYouCan 2023 – Military Institute of Science and Technology

Volunteer and Leadership Roles

Vice President   January 2024 - December 2024
CSE Club   *PSTU*