Ruhit Shah

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EDUCATION

Patuakhali Science and Technology University, B.Sc. in Computer Science & Engineering
Year: 2019-2024
Medium of Instruction: English
Total Credits: 165
CGPA: 3.476/4.00 (Position in class: 8th out of 65 students)

RESEARCH INTERESTS

- AI-Driven Health Technologies
- AI for Social Good(s)
- Computer Vision and NLP Practical Applications
- Antenna Design and Optimization
- Machine Vision

RESEARCH WORK

PUBLICATION

[1] R. Shah, J. Haque, A. Masud, R. Azim, and I. Hossain, "Patch Antenna Design and Optimization Using Machine Learning Techniques" in 2024 6th International Conference on Sustainable Technologies for Industry 5.0 (STI), Narayanganj, Bangladesh, 2024, pp. 1-6.

TECHNICAL STRENGTHS

- **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

EXPERIENCE

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

- Researching and developing state-of-the-art ML models.
- Implementing data processing algorithms in python.

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. Movie Genre Classification Using TF-IDF and Logistic Regression (Github)

- Developed a machine learning pipeline to classify movie genres from IMDb descriptions using TF-IDF text features and logistic regression, achieving high validation accuracy. data and make informed decisions.

4. Credit Card Fraud Detection Using Decision Tree Classifier (Github)

- Built a fraud detection model using a Decision Tree classifier on financial transaction data, achieving over 98% accuracy on test data after preprocessing and label encoding.

5. Bank Customer Churn Prediction Using Random Forest and SMOTE (Github)

- Predicts customer churn using Logistic Regression, Random Forest, and XGBoost with SMOTE balancing and SHAP explainability.

6. Enterprise Network Configuration and Simulation using Cisco Packet Tracer (Github)

- Designed and simulated a complete enterprise-grade network using Cisco Packet Tracer, implementing VLANs, OSPF, DHCP, ACLs, IPsec VPN, NAT, and VoIP services with detailed router/switch configurations.

HONOURS

- 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

RELEVANT COURSE WORKS OF UNDERGRADUATE PROGRAM

• **Computer Science:** Programming Language, Data Structure and Algorithms, Algorithm Engineering, Software Engineering, Database Systems, Numerical Methods, Discrete Mathematics, Artificial Intelligence, Machine Learning, Computer Graphics and Image Processing.
• **Signal Communication:** Basic Communication Engineering, Signal and Linear Systems, Optical Fiber Communication, Network Routing and Switching, Cellular Mobile and Satellite Communication and related lab courses.
• **Mathematics:** Differential and Integral Calculus, Co-ordinate Geometry and Linear Algebra, Statistics, Vector Analysis and Complex Variables, Ordinary and Partial Differential Equations.
• **Electrical & Electronics:** Basic Electrical Engineering, Electrical Technology, Digital Logic Design, Microprocessor and Interfacing, VLSI and related lab courses.

RELEVANT ONLINE COURSES

Machine Learning by simplilearn
Deep Learning by simplilearn
Advanced Programming with Java by Bangladesh Computer Council, ICT Division
Prompt Engineering for Developers by DeepLearning.ai

TEST SCORE

- IELTS scores: Overall 7.0 (Reading: 7.0, Listening: 8.0, Speaking: 6.5, Writing: 6.5)

ORGANIZATION

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

REFERENCES

Dr. Md Samsuzzaman
Professor, Department of Computer and Communication Engineering, PSTU, Patuakhali, Bangladesh
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Scholar Profiles: Google Scholar
Dr. Md Abdul Masud
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