S.M. Shahriar

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Sayeem-Velocity | Portfolio

Education

Chittagong University of Engineering and Technology (CUET) *3 March 2022–Present*
BSc in Electronics and Telecommunication Engineering

- **CGPA:** 3.81/4.00 (up to 6th semester)
- **Award:** CUET Alumni Association Merit Award—Awarded for academic excellence (2023)

Technical Skills

- **Programming Languages:** Python, C, C++, MATLAB
- **AI & Machine Learning:** Supervised Learning, Clustering, Deep Learning, Neural Networks, Natural Language Processing, Image & Signal Processing
- **Frameworks & Libraries:** LangChain, LangGraph, TensorFlow, Keras, PyTorch, Pandas, Seaborn, Matplotlib
- **Tools & MLOps:** Git, GitHub, Docker, ZenML
- **Web & Software Development:** HTML, CSS, Flask, FastAPI, Streamlit
- **Data Handling & Analysis:** Data Cleaning, Data Visualization, Statistical Analysis
- **Database Management:** MySQL

Experience

Industrial Trainee *Dhaka, Bangladesh*
Brain Station 23 *May 2025–May 2025*

- Developed and deployed hands-on Machine Learning projects utilizing Streamlit, ZenML, Docker, and FastAPI.

Instructor *Chattogram, Bangladesh*
Unique Schooling (EdTech Company) *April 2023–June 2024*

- Conducted engaging online electronics classes as an instructor.

Projects

Uber Fare MLOps *2025*

- Developed a complete MLOps pipeline using ZenML to predict optimal Uber fares, identify high-demand zones, and visualize pricing trends.
- Integrated model versioning, scheduled retraining with Gaussian noise augmentation, and automatic deployment based on MAE improvement.
- **Skills Used:** LightGBM, Random Forest, ZenML, FastAPI, Docker.

Smart Plot Generator *2025*

- Developed an interactive Streamlit web application for dynamic CSV data visualization with user-controlled plots, themes, and upload support.
- **Skills Used:** Pandas, Plot Generator, Streamlit.

Face Recognition & RFID-Based Smart Attendance System *2025*

- Employed MTCNN and OpenCV for accurate frontal face detection and bounding box generation and implemented ResNet-34 for robust subject identification and enhanced prediction accuracy.
- **Skills Used:** Numpy, MTCNN, OpenCV, ResNet-34, FLASK.

Ensemble Learning-Based Optimization of S11 Parameter in Microstrip Patch Antennas for Wi-Fi 7 Applications *2025*

- Proposed multiple machine learning approaches to optimize the S11 parameter of microstrip patch antennas tailored for Wi-Fi 7 and various applications.
- **Skills Used:** Numpy, Ensemble Learning, Hyperparameter Tuning, FLASK.

Deepfake Detection: A Convolutional Neural Network Approach *2025*

- Processed 200K+ deepfake images, tested on 3,000, with 85.92% accuracy in face classification.
- **Skills Used:** Numpy, Image Enhancement, CNN.

Benign Prostate Hyperplasia (BPH) Detection By ResNet18 and SVM *2025*

- Processed 200K+ deepfake images, tested on 3,000, with 85.92% accuracy in face classification.
- **Skills Used:** Numpy, Image Enhancement, CNN.

EEG Data Analysis and Alcoholism Detection Using Machine Learning *2024*

- Analyzed EEG data by converting signals into spectrograms and classified subjects as alcoholic or non-alcoholic using a hybrid CNN-SVM model with over 90% accuracy.
- **Skills Used:** Numpy, Matlab, CNN-SVM

Awards & Achievements

Finalist (13th out of 108 teams) *Khulna, Bangladesh*
At the Datathon, a machine learning contest of KUET CSE Bitfest-2025 *2025*

Finalist *Worldwide*
IEEE Signal Processing Cup *2025*

1st Runner-up *Chattogram, Bangladesh*
Programming Hackathon hosted by the Department of ETE at CUET *2023*

Kaggle Expert

Publications

1. A CLAHE-Enhanced Vision Transformer with OVR-SVM for Breast Cancer Classification *2025*
International Conference on Quantum Photonics, Artificial Intelligence, and Networking (QPAIN 2025)

2. Machine learning-Assisted Return Loss Optimization for Quad-Band Microstrip Antenna for 5G and WiFi-6/7 Applications *2025*
International Conference on Quantum Photonics, Artificial Intelligence, and Networking (QPAIN 2025)

3. A Quad-Band Microstrip Antenna for 5G, WiFi-6/7, and Satellite Communications *2025*
International Conference on Quantum Photonics, Artificial Intelligence, and Networking (QPAIN 2025)