S.M. Shahriar

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Education

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

- **CGPA:** 3.73/4.00 (up to 4th semester)
- **Award:** CUET Alumni Association Merit Award—Awarded for academic excellence (2023)

Technical Skills

- **Languages:** Python, C, C++, MATLAB
- **Software and Tools:** MS Office (Word, Excel, PowerPoint), VSCode, PyCharm, GitHub, Jupyter Notebook, LaTeX, ADS, CST
- **Web Development:** HTML, CSS, PHP, MySQL
- **Machine Learning and AI:** Supervised Learning, Neural Networks, Model Optimization, TensorFlow, Keras, Natural Language Processing, Pytorch, Image Processing, Signal Processing, Flask
- **Data Analysis:** Pandas, Data Cleaning, Data Visualization (Matplotlib, Seaborn), Statistical Analysis

Experience

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

- Conducted engaging online electronics classes as an instructor.

Projects

Smart Plot Generator *2025*

- Developed an interactive web application using Streamlit for dynamic CSV data visualization.
- Allows users to upload CSV files, select plot types, and apply custom color themes.
- Enables fast and flexible data exploration without writing code.

Face Recognition & RFID-Based Smart Attendance System using Jetson Nano *2025*

- Employed MTCNN and OpenCV for accurate frontal face detection and bounding box generation to create face arrays.
- Implemented ResNet-18 for subject identification, enhancing prediction accuracy and robustness in dynamic environments.

Deepfake Detection: A Convolutional Neural Network Approach *2025*

- Processed 200K+ deepfake images, tested on 3,000, with 85.92% accuracy in face classification.
- Used a multi-layer CNN for improved face detection and classification.

Benign Prostate Hyperplasia (BPH) Detection using ResNet18-SVM *2025*

- Processed 94 BPH and 82 Normal subject images, augmented to 2,000 samples for robust training.
- Achieved 95.5% accuracy, recall, and F1-score by ResNet18 for feature extraction and SVM for classification.

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 application.

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

- Analyzed EEG data and turned the signals into spectrograms to classify the subject as alcoholic or non-alcoholic.
- Designed a hybrid CNN-SVM model that reached over 90% accuracy in identifying subjects.

Publications

Classification of Cancer from Breast Ultrasound Images using Vision Transformer *2025*
Undergraduate Conference on Intelligent Computing and Systems (UCICS 2025)

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