Monirul Islam Mahmud

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Education

B.Sc. in Computer Science & Engineering (2020 - ongoing)
North South University, Dhaka, Bangladesh.
CGPA: 3.40/4.00

Higher Secondary School Certificate (2019)
Govt. Hazi Mohammad Mohsin College, Chittagong.
GPA: 5.00/5.00

Secondary School Certificate (2017)
Govt. Muslim High School, Chittagong.
GPA: 5.00/5.00

Work Experience

- **Research Assistant (RA)**
  Design Inclusion Access Lab - DIAL
  North South University, Dhaka, Bangladesh.
  July 2023 – Present

- **Trainee Engineer (Data Science)**
  Systech Datasoft, Dhaka
  August 2023 – Present

- **General Member at Team Provision**
  NSU ACM Student Chapter
  Feb 2021 – Jan 2022

- **Volunteer of Content Writing**
  IEEE NSU Student Branch
  March 2021 – August 2022

Research Interests

Machine Learning | Data Science | Artificial Intelligence | Explainable AI | Federated Learning | Human Computer Interaction | Computer Vision | Human Activity Recognition | Predictive Analysis.

Ongoing Research Projects

- **Human Activity Recognition with sensor data: A Federated Learning Approach.**
  Activity Recognition project for Elderly people with Accelerometer and Gyroscope data. Federated Learning Technique is applied here for user data privacy. Also, Explainable AI (XAI) techniques SHAP and LIME are used in this project.

- **Diabetic Foot Ulcer Detection using Explainable AI: A Deep Learning Approach.**
  Foot Ulcer Detection project is done using different foot images, where image process is done with different Explainable AI techniques.

- **Ischemic Stroke Prediction with PCA and different Resampling technique.**
  Merged dataset of public and collected healthcare data is used in this project where different types of resampling techniques and PCA used. Additionally, XAI techniques SHAP and LIME are implemented for transparent result. Lastly, a complete Web App is developed for this predictive analysis project.

- **Alternative Credit Scoring prediction using different Machine Learning and Deep Learning techniques and XAI.**
  Merged dataset of public and collected Bank data is used here. Also, different XAI techniques are implemented to explain the Blackbox machine learning models.

Technical Skills

- Language: C, php, Java, Python.
- Framework: Django, Flask.
- Tools: Power BI, Slack, Trello, Jira, Latex.
- Soft Skills: Teamwork, Communication, Problem solving.