Mushfika Rahman

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Personal Profile

Diligent computer science graduate, with a passion for problem-solving and innovation. Aspiring to conduct research in improving human-machine interaction, keen towards implementing data analysis and impacting machine learning, deep learning models, and intelligent software systems.

Research Interest

Data Science, Machine Learning, Intelligent Software Systems, Human-Computer Interaction

Education

Baylor University   *Waco, TX*

Msc in Computer Science (CGPA 3.45/4.00)   *Aug 2021 - Jan 2024 (Expected)*

- **Courses:** Human Computer Interaction, Introduction to Machine learning, Data Mining, Advanced Software Engineering

Ahsanullah University of Science & Technology   *Dhaka, Bangladesh*

BSc in Computer Science & Engineering (CGPA 3.58/4.00)   *Jun 2015 - Jun 2019*

- **Courses:** Object Oriented Programing, Data Structure, Algorithm, Database Management System, Numerical Analysis, Artificial Intelligence, Pattern Recognition, Image Processing, Computer Graphics, Operating System

Research Experience

On going research   *Baylor University*

Object recognition in augmented reality application aiding in foreign language vocabulary learning   *2023*

Conference Paper   *NAACL LXNLP*

Question Answering from Privacy Policy Documents   *2022*

- Analyzed BERT model and their variations' performance.
- Utilized pre-trained BERT model and their variation on legeal context.
- Awarded as best paper in the conference.
- **Technologies:** Deep Learning, Natural Language Processing.

Conference Paper   *NWYIC*

Music generation using deep learning   *2022*

- Implemented data processing and pipelining to generate music from high level programing language.
- Utilized pre-trained LSTM for music generation.
- **Technologies:** LSTM, Deep Learning, Natural Language Processing, Data PreProcessing.

Jornal Paper   *IJAIS*

An Approach to Facilitate Business System by Multiple Barcode Detection using Faster RCNN   *2019*

- Created custom dataset for training and data preprocessing for the data .
- Utilized pre-trained Faster RCNN for object detection purpose.
- **Technologies:** Transfer Learning, Deep Learning, Faster RCNN, Computer Vision.

Work Experience

Baylor University   *Waco, Texas*

Graduate Teaching Assistant   *Jun 2023 - Current*

- Responsible for tutoring freshman students in programming fundamental
- Helping students with programming tasks
- **Technical Skills:** C++

Baylor Research and Innovation Collaborative   *Waco, Texas*

Full Stack Intern   *Aug 2021 - May 2023*

- Collaborate with four-person team to develop a specialized software for airplane fault detection.
- Implemented the front-end and integration with back end for the specialized software.
- Developed several custom control providing special functionality and responsive solution for the user interface with WPF C#.
- Implemented custom control canvas to draw user-required functionality.
- Analyzed organization's cloud-compatibility infrastructure and maintained AWS workspace for the team.
- Executed responsive user-interface with React for a specialized web application.
- **Technical Skills:** C# (WPF framework), React JS, JAVA-FX, AWS, Git.

Deligram HQ   *Dhaka, Bangladesh*

BackEnd Developer Intern   *Apr 2021 - Jun 2021*

- Collaborated with three-person team to develop an enterprise solution.
- Investigated and solved several issues with current running system.
- **Technical Skills:** Laravel Framework(PHP),HTML, CSS, MYSQL, Docker.

Institute of Science Trade & Technology   *Dhaka, Bangladesh*

Junior Lecturer , Dept of Computer Science & Engineering   *Jan 2020 - Aug 2020*

- Designed and Conducted classes.
- Assisting students for their projects, setting up assignments to meet the milestones.
- **Courses Instructed:** Introduction to Computer Science, Software Engineering, System Analysis, Introduction to Algorithms & Data Structure.
- **Soft Skills:** Leadership, Time Management, Communication, Logical Thinking.

Projects

Bear Feed   *Waco, TX*

Baylor University   *Aug 2022 - Dec 2022*

- Analyze of different software components and methodologies in the project
- A web application built on JAVA spring boot and React JS
- Authentication, Authorization, Validation and implementing complex business rules.
- **Technical Skills:** JAVA (Spring boot), React JS, JMS, WebSocket
- **Soft Skills:** Team Work, Presentation skills, Report writing.

Personality Prediction using machine learning   *Waco, TX*

Baylor University   *Jan 2022 - May 2022*

- Analysing data from public data of kaggle.
- Preprocessed data to balance and better performance.
- Analysed different types of machine learning algorithms an d implemented machine learning based classifier to predict personality on Myres-Briggs scale.
- **Technical Skills:** Python, Pandas, SVM, Regression
- **Soft Skills:** Presentation skills, Report writing.

Pivot   *Dhaka Bangladesh*

Ahsnaullah University of Science & Technology   *2017*

- A web application for rating and reviewing tv shows and movies and books.
- Deplyed on local server.
- **Technical Skills:**HTML, CSS, PHP,MYSQL.
- **Soft Skills:** Presentation skills, Logical Thinking.

Demo Blog   *Dhaka Bangladesh*

Personal Project   *2020*

- A web application for writing blog posts runs on local machine.
- Authentication, Authorization, Validation.
- **Technical Skills:**HTML, CSS, PHP,MYSQL.

Skills

Programming	Java(Spring Boot),Python (Pandas, NumPy, Scikit-learn, Tensorflow.),C#, PHP, C/C++, HTML/CSS, React-JS, SQL.
Miscellaneous	Linux, LaTeX(Overleaf/R Markdown) Microsoft Office,Git.
Soft Skills	Time Management, Teamwork, Problem-solving, Documentation.

Standardized Exam

2019	**304, Quant 155, Verbal 149, AWA 3.5,** Graduate Record Examinations (GRE)		*Bangladesh*
2021	**103,** TOEFL		*USA*

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References available upon request.

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