Neelima Monjusha Preeti

Associate Software Engineer (AI), Era Infotech Ltd., Dhaka, Bangladesh

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RESEARCH INTERESTS

Computer Vision, Image Processing, Health Informatics, Deep Learning, Data Science, Artificial Intelligence.

EDUCATION

Jahngirnagar University, Dhaka, Bangladesh | August 2023 — Present
Master of Science in CSE (on-going) | Cumulative GPA: 3.94/4.00(1st semester)

Thesis Title: Detection of Brain Tumor from MRI Image under Deep Learning and Bag of Features Algorithm

Jahngirnagar University, Dhaka, Bangladesh | February 2018 — July 2023
Bachelor of Science: CSE | Cumulative GPA: 3.76/4.00
| (3.91/4.00 last 4 semesters)

Thesis Title: Handover Detection over WAN using Fuzzy Inference System

JOB EXPERIENCE

ERA Infotech Ltd | Dhaka, Bangladesh
Trainee Software Engineer (AI) | March 2024 — Present

- Entrusted with the Research and Development for AI features for the country's top private and public banks.
- Train OCR for extracting Local and international text from different national documents.
- Suggesting and implementing AI features for Fintech-based projects.
- Making Glass Detection System for Facial Recognition Attendance System.
- Custom Signature Card Detection model for government and private banks.
- Core back-end developer for implementing an EKYC (Electronic Know Your Customer) app for a reputed private bank .

PROJECTS

Sign Language Interpreter | March 2022
Domain: Computer Vision, Software Engineering Tools: Python | ⭘

- Developed real-time sign-to-text conversion feature with custom-made dataset and object detection.
- Captured real-time pictures for tailoring the dataset and text-to-sign conversion feature along with overseeing dictionary feature for sign language.
- Followed the Software Development Life Cycle (SDLC) rigorously, from drafting the Software Requirements Specification (SRS) in LaTeX to integrate Continuous Integration (CI) using GitHub Actions.

Fake News Detection (NSDC - HerWILL Data Science Contest) | December 2023
Domain: Natural Language Processing, Machine Learning | ⭘

- It leverages NLP and ML skills - how to represent text in a machine-understandable format to classify it and extract whether news is fake or real. The project was developed using the Multinomial Naive Bayes Model and SVM.

Sentiment Analysis of Movie Reviews (NSDC Data Science Projects) | December 2023
Domain: Natural Language Processing, Machine Learning, Data Science | ⭘

- A sentiment analysis model to classify a given review as positive or negative and a Word Cloud to visualize the most frequent words in reviews.

Image Classification | February 2024
Domain: Image Processing, Computer Vision, Deep Learning | 🤗 Hugging Face
[Project and Model Documentation](#)

- Developed an app space that is going to classify between dog, cat, and panda.
- Trained a custom model with a custom dataset for classification.
- Deployed the model and app in HuggingFace.

German to English Translator April 2024

Domain: Neural Machine Translation, Deep Learning 🤗 **Hugging Face**
[Project and Model Documentation](#)

- Developed an app space that is going to translate German language to English language.
- Trained a custom model with transformer architecture.
- Deployed the model and app in HuggingFace.

PUBLICATIONS

[**J.1**] **Neelima Monjusha Preeti**, Faiza Feroz, Dr. Md. Imdadul Islam (2023). Handover Detection of WAN using FIS. Jahangirnagar University Journal of Electronics and Computer Science. [under review]

[**J.2**] **Neelima Monjusha Preeti**, Sushmoy Barua, Anup Majumdar (2024). Feature Ranking for Polycystic Ovary Syndrome (PCOS) Detection using XAI from Ultrasound Images [In Preparation]

[**C.1**] **Neelima Monjusha Preeti**, Dr. Md. Imdadul Islam (2024). Detection of Brain Tumor from MRI Image under Deep learning and Bag of Features Algorithm [Master's Thesis- Ongoing]

SELECTED COURSES

Master's Courses

- Natural Language Processing
- Machine Translation
- Deep Learning
- Machine Learning

Bachelor's Courses

- Artificial Intelligence
- Data Mining
- Pattern Recognition and Machine Learning
- Digital Image Processing

AWARDS

National Science and Technology (NST) Fellowship April 2024
Ministry of Science and Technology (MoST)

- Ranked in the top 100 among submitted master's thesis proposals across Bangladesh.
- Awarded for demonstrating excellence in scientific research and innovation during the MS program.
- Prestigious fellowship supporting scientific advancement in Bangladesh.

Deans Scholarship for Academic Excellence 2018 - 2023
Department of Computer Science and Engineering, Jahangirnagar University

- Awarded for academic excellence throughout the BSc journey.

Nationwide Red and White Innovation Olympiad 1.0 January 2021
Organized by Red and White

- A case study was provided regarding medical service issue and patient and doctor data security.
- Teams were supposed to provide with a solution system for eradication the medical myths.
- poster title - Designed EHR System with Machine Learning for Data security and eradication of health myths.

1st International Poster Competition on Achieving SDGs in Developing Countries March 2021
Gold Award, Organized by Univ

- Awarded for presenting solution on achieving sustainable development goals in developing countries.
- Poster title - Building Rich Community DHR System and using ML for Decision Making ensuring Enriched Health Facility and eradicating Health Myths.

OTHER EXPERIENCES

- Private tutoring since *2018*.
- **Designer at Voice of Code Design Team** - a global platform of tech write-ups for the promotion of technical blogging managed by Microsoft Learn Student Ambassadors *(2020-2022)*.
- Volunteered for different Fundraising campaigns on campus, for winter clothing, and medical treatment costs for insolvent families *(2018-2019)*.
- Volunteered for on campus Blood donation organization "BADHON" which is centrally connected to the whole country for managing blood through vast network *(2018-2024)*.
- Volunteered as a scribe for Ada Lovelace Celebration and Girls Innovation Bootcamp 2 organized by Bangladesh Open Source Network (BdOSN) *(2019-2020)*.

ENGLISH & GRE TESTS

TOEFL: 96 (overall score)

Listening: 23 — Reading: 22
Speaking: 27 — Writing: 24
Test date: December 2023

GRE General Test:

Quant: 157 — Verbal: 147
Analytical writing: 3.5
Test date: October 2023

SKILLS

- **Programming:** Python, Prolog, C, C++, Java, SQL.
- **Frameworks for:** TensorFlow, Keras, Pytorch, WEKA, Scikit Learn.
- **Web Technologies:** HTML, CSS, JavaScript, Node.js, .NET, Express.js.
- **Database Systems:** MySQL, PostgreSQL, Oracle, MongoDB
- **Implementation Libraries** NumPy, Pandas, Matplotlib, Scikit-learn, TensorFlow, PyTorch, Keras, Transformer, LLM, Bert, Image Processing, Data cleaning, visualization and wrangling, EDA.
- **DevOps & Version Control:** Git, GitHub Actions, Microsoft Azure.
- **Software:** Jupyter Notebook, Pycharm, Matlab, Python IDLE, Prolog, Intellij IDEA, CodeBlocks, Microsoft SQL Server, VS Code.
- **Preparation Systems:** LaTex, Microsoft Word, PowerPoint.

RELEVANT CERTIFICATIONS

Generative AI with Large Language Models   Introduction to LLs
Decoding Data Insights & Impact, Intro to NLP Processing   Introduction to Machine Learning

REFERENCES

Dr. Md. Imdadul Islam
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Anup Majumdar
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