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PROFILES

 **LinkedIn**
 **GitHub**
 **Google Scholar**
 **YouTube**
 **LeetCode**

SKILLS

Machine Learning

Symbolic ML NLP Deep Learning
Hugging Face PyTorch Lightning
TensorFlow Keras Data analysis
Image analysis

Software Development

Flutter Android iOS Spring Boot
Flask ASP.NET Core Python Dart
Java Kotlin GoLang C# JS
TS C RESTful API GraphQL gRPC
WebSocket MQTT

Infrastructure

Docker Redis Oracle PostgreSQL
MongoDB Azure GCP Firebase
AWS MPI bash

Personal

Result Driven Quick Learner Resilient
Proactive Innovative

EDUCATION

2022 - 2023

MASTER OF SCIENCE

Computer Science & Engineering
(Natural Language Processing)
BRAC University, Dhaka
CGPA : 4.00/4.00

Award: Scholarship

2016 - 2019

BACHELOR OF SCIENCE

Biomedical Engineering
Military Institute of Science and
Technology, Dhaka
CGPA : 3.47/4.00

Award: Dean's List of Honour

A F M Mohimenul Joaa

Data Scientist, NHR Fellow & PhD Candidate at TU Dresden
M.Sc in Computer Science & Engineering (NLP)
BRAC University, Dhaka, Bangladesh

I was recently selected as a fellow for the fourth cohort of the NHR Graduate School and will begin my PhD journey on April 1st. With a background in Computer Science and over four years of experience in software engineering, I'm passionate about applied NLP, solving complex problems, and building scalable solutions. Beyond research and development, I enjoy hiking, teaching, and collaborating with others.

EXPERIENCE

NOV 2024 **Brac University**

PRESENT **Research Assistant**

I recently joined Professor Swakkhar Shatabda's research team as a Research Assistant, where I am working on applied NLP and LLM based research projects.

ML NLP PyTorch Hugging Face Kaggle

DEC 2023 **Interactive Cares**

JUN 2024 **Support Instructor**

As a Support Instructor at Interactive Cares, I taught programming, data structures, and cross-platform mobile and web application development using Flutter through weekly conceptual classes.

Problem Solving Data Structure Flutter Teaching

AUG 2023 **Code Intel**

NOV 2024 **Senior Software Engineer**

While completing my MSc thesis, I worked remotely as a part-time Senior Software Engineer specializing in ASP.NET Core and Kentico CMS at CodeIntel. I developed tech solutions for the mortgage industry, provided expert consulting, and led the development and architecture of their lead collection chatbot.

ML NLP Flutter dart C# ASP.Net Core Kentico CMS

MAR 2020 **bKash**

JUL 2023 **Software & Solution Engineer**

At bKash Initially, as a mobile app engineer, I helped develop the Agent and Customer app and worked with the Advanced Research Team during my final year. Notable products that I have made and contributed to include server driven UI for mobile apps, auto payment system, PIN reset using passive liveness detection with face matching, and Bangla OCR for photo-ID verification.

Flutter Android iOS Spring Boot Microservices gRPC BLoC OCR
PyTorch Lightning AWS Dart Java Kotlin python JSON Schema

JAN 2020 **Military Institute of Science and Technology**

MAR 2020 **Research Intern**

Developed an online report system for the Armed Forces Institute of Pathology and designed the UI, communication protocol, and control system for a COVID-19 homegrown ventilator project.

Flutter PID Controller Arduino Raspberry Pi WPF C# Oracle Node.js

MAY 2024

Curious Learner: A Neuro-Symbolic Approach for Function Execution via Natural Language [🔗](#)

I developed a neuro-symbolic generative model that can execute tasks via natural language. In experiments on translating mathematical functions to and from natural language, our 111M parameter model achieved impressive results, demonstrating its potential for NLP-based command-line tools, customer service automation and natural language-based operating systems.

NLP Transformer Foundational Model Sentence transformer Pytorch Python

FEBRUARY 2024

Siamese-Transformer Network for Offline Handwritten Signature Verification using Few-shot [🔗](#)

A Siamese-Transformer network for distinguishing between genuine and forged signatures is proposed & built, combining Siamese networks and Transformers. The model achieves 99.17% accuracy and a 0.99 F1 score in few-shot learning, demonstrating strong performance on benchmark datasets.

Siamese Neural Network Transformer Encoder layer CNN Triplet Loss Pytorch Python

MAY 2018

Development of Low Cost Central Monitoring Platform by Modeling and Simulation for Patients Care in Low Middle Income Countries [🔗](#)

Proposed and developed a cost-effective, centralized patient monitoring system for low-middle income countries that can monitor vital signs like heart rate, oxygen levels, and blood pressure. This system aims to improve patient care by making it easier for doctors to monitor their patients and respond quickly.

Raspberry Pi 3 Arduino Mega Python PyQt I2C Protocol TCP/IP Linux

PROJECTS

AUGUST 2022
DECEMBER 2024

Machine Learning Projects [🔗](#)

- Transliteration Board: A Bangla Word Suggestion System for Misspellings with Future Sentence Completion in Development. [🔗](#)
- Street Stat App detects potholes and reports road hazards in real-time using sensor data. [🔗](#)
- Federated Extra Tree for loan approval system via decentralized data sharing. [🔗](#)
- Identify the most effective approach for Named Entity Recognition among DNN, Spacy & BERT. [🔗](#)

Hugging face Transformer Spacy NLTK Pytorch Lightening Tensorflow Keras Python gRPC Flask Azure Xgboost Jupyter Docker

AUGUST 2019
DECEMBER 2023

Software Projects

- GODDB: Distributed database with transactional processing and efficient GraphQL queries. [🔗](#)
- Flutter Clean Architecture Apps Demos: Daily News App [🔗](#), Weather App [🔗](#)
- E-Med: Uploads patient reports with unique codes for distribution via the Patient App. [🔗](#)
- Dume App: Connects students with expert tutors via customizable profiles and flexible packages. [🔗](#)

Android Java Kotlin Firebase GCP Windows Presentation Foundation Oracle Node.js C# TypeScript JavaScript Go GraphQL Json Schema Dart BLoC Repository Pattern Rest API Clean Architecture

REFERENCES

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