# Sazzad Hussain Farhaan

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**CAREER OBJECTIVE** — Entry-level AI Engineer with experience in Machine Learning, NLP, and Computer Vision, specializing in model development, deployment, and optimization. Passionate about ethical AI, AI project management, and scalable AI solutions. Proven ability to bridge research and industry applications, driving innovation through data-driven decision-making.

#### RECENT EXPERIENCE

AI Support Engineer 08/2024 – Present

CS Meta Limited, Dhaka, Bangladesh

Full-time - Onsite

Domain: AI Deployment Support, Model Troubleshooting, Prompt Engineering, API Optimization, MLOps

AI Project Coordinator 06/2024 – Present

Genmorphics AI Solutions, Dhaka, Bangladesh

Part-time - Remote

Domain: AI Project Management, ML Workflow Optimization, AI Talent Acquisition, AI Product Lifecycle Management

Resource Allocation for AI Teams, Risk Assessment in AI Projects, Stakeholder Communication, Agile

AI Developer 05/2024 – 10/2024

Web and More Limited, Blackpool, United Kingdom

Part-time - Remote

Domain: Image Processing, OCR (Optical Character Recognition) Tasks, Image Denoising, Compression Algorithms.

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Machine Learning Engineer09/2023 - 03/2024Omdena, Toronto, CanadaPart-time - Remote

Domain: Natural Language Processing (NLP), Web Scraping, Computer Vision, Medical Image Analysis.

Machine Learning Engineer 11/2021 – 02/2024

Creative IT Institute, Dhaka, Bangladesh

Full-time - Onsite

Domain: Computer Vision, NLP, Relational Agents, Generative AI, Python Programming, Agile.

Data Scientist 10/2023 – 12/2023

Fellowship.AI, California, United States

Fellowship - Remote

Domain: Large Action Models, AI, NLP, Transformer Architectures, ETL Pipelines.

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Undergraduate Teaching Assistant 11/2017 – 04/2019

University of Liberal Arts Bangladesh

Part-time - Onsite

Domain: Computer Science, Calculus, Programming Languages, Student Advising, Mentoring.

#### **PROJECTS**

## **EquiJob - AI-Driven Bias Detection in Job Descriptions**

Link to Case Study

Technologies: Word2Vec, GloVe, BERT, GPT, EDA, Selenium, Beautiful Soup

Developed a tool to detect and analyze gender bias in job descriptions using NLP techniques. Conducted feature engineering, model training, and validation.

### Early Detection and Diagnosis of Alzheimer's Disease

Open in Hugging Face

**Technologies:** Nibabel, OpenCV, Scikit-Image, Keras, TensorFlow, PyTorch, CNN Transfer Learning, DeepChecks, Docker, FastAPI Collaboratively developed a CNN for early detection of Alzheimer's disease using a dataset of 6,400 MRI images. Model achieved 99.22% accuracy. Deployed as a REST API using Docker and Streamlit, hosted on Hugging Face Spaces.

## Travel Agent Large Action Model (LAM)

Open in GitHub [Private Repository]

**Technologies:** Amadeus API, OpenAI API, 8-bit Quantization, Few Shot Learning, Mistral LLM, Ollama LLM, LangChain, spaCy Collaborated on a travel assistant application using Amadeus API and OpenAI API. Implemented a chatbot interface with Streamlit, and contributed to a Large-Action Model (LAM) pipeline. Enhanced skills in AI and NLP, and optimization techniques.

#### **EDUCATION**

#### **Bachelor of Science in Computer Science and Engineering**

2016 - 2020

University of Liberal Arts Bangladesh (ULAB)

CGPA: 3.33 on a scale of 4.00

(Thesis + Project): Natural Language Processing based Quality LMS for Students Evaluation and Engagement Metrics Calculation

#### RESEARCH PUBLICATION

- 1. Farhaan, S.H., Hasan, M.M., Ghani, F.M., Mansoor, N. (2024). Enhancing Student Engagement and Performance Evaluation: An Integrated Approach for Quality Learning Management System. In: Proceedings of World Conference on Information Systems for Business Management, ISBM 2023, Lecture Notes in Networks and Systems, vol 833, Springer, Singapore,
- 2. Prodhan, M.S., Diip, N.S., Akter, S., Farhaan, S.H., Mansoor, N. (2024). Advancing Fish Species Identification in Bangladesh: Deep Learning Approaches for Accurate Freshwater Fish Recognition. In: Proceedings of World Conference on Information Systems for Business Management, ISBM 2023, Lecture Notes in Networks and Systems, vol 834, Springer, Singapore,

#### **TECHNICAL COMPETENCIES**

**Programming Languages:** Python, C++, Java, JavaScript, TypeScript

Machine Learning & Deep Learning: Supervised learning, Unsupervised learning, CNNs, RNNs, LSTM, Transformer Architectures, Model training, Model evaluation, Parameter tuning, Multimodal learning, Attention mechanisms, Transfer learning

Tools & Platforms: Git, GitHub, DVC, DagsHub, Jupyter Notebooks, Docker, AWS Sagemaker, Roboflow, Data Annotation, LATEX, SPSS

**Libraries and Frameworks:** TensorFlow, Keras, PyTorch, DLTK, OpenCV, Scikit-learn, Scikit-image, NumPy, SciPy, Tesseract OCR, Seaborn, Streamlit, LangChain, SpaCy, FastAI, React Native CLI, Hugging Face Transformers, librosa, torchaudio, Fairseq, OpenAI CLIP

Computer Vision: Edge detection, Histogram equalization, Morphological operations, Filtering techniques, Image denoising, Object detection, Image segmentation, Optical character recognition (OCR)

Web Scraping: Selenium, Beautiful Soup

## **SOFT SKILLS**

Public Speaking, Team Work, Steadiness, Emotional Intelligence, Human Management, Mentoring

#### **ACHIEVEMENTS**

The Gold Standard Awardee, The Duke of Edinburgh's International Award: Awarded by the British High Commissioner for achieving the Gold Standard in skill, physical recreation, social welfare, and adventurous activities.

Vice Chancellor's Honors List Scholarship, Summer 2016

Awarded Merit based Scholarship worth 3,500 USD from the University of Liberal Arts Bangladesh

The Silver Standard Awardee, The Duke of Edinburgh's International Award: Silver Standard achieved in skill, physical recreation, social welfare, and adventurous activities.

The Bronze Standard Awardee, The Duke of Edinburgh's International Award: Achieved Bronze Standard in skill, physical recreation, social welfare, and adventurous activities.

Top 40, NASA Space Apps Challenge 2018, Regional Round: Project - Sustainable Multi-Source Energy Harvesting System: Solar Tracking and Raindrop Kinetic Conversion in a Hybrid Photovoltaic Array.

Champion, ULAB Techfest 2019, Idea Contest: Project - AI Integrated Wellness Tracker: A comprehensive mobile application for personalized nutritional monitoring, calorie balance, and exercise optimization.

1st Runner-Up, ULAB Techfest 2019, Poster Display: Project - Acoustic Energy Harvesting in Urban Environments: Converting Noise Pollution into Sustainable Electric Power.

**Lead Volunteer, IJCCI 2019:** Led a team of more than 50 volunteers to successfully organize the International Joint Conference on Computational Intelligence 2019.

## CO-CURRICULAR EXPERIENCE

## Chairperson, IEEE CS ULAB Student Branch Chapter 04/2019 - 08/2020

Founding Chairperson of the Student Branch Chapter. Led the Delegated activities from the Regional Section to the Student executive team for 25 collaborative and internal events.

## Chairperson, IEEE ULAB Student Branch

03/2018 - 04/2019

Prepared the Branch Annual Plan, Organized and coordinated Facilitated collaboration among 23 IEEE-affiliated universities more than 20 flagship and international events for the student in Bangladesh, fostering research groups for professional and branch. Increased membership drive to 250%.

## Secretary, IEEE ULAB Student Branch Chapter

07/2017 - 04/2018

Branch. Increased membership from 10 to 70+ members.

## Lead Publication, Team Spark, IEEE CS Bangladesh Chapter 07/2019 - 08/2020

student members to bridge the industry-academia gap.