# SAZZAD HUSSAIN FARHAAN

**CAREER OBJECTIVE** — As an AI Developer with significant experience in Machine Learning, I am seeking opportunities to contribute to cutting-edge research and practical applications in Ethical AI for social good. I am open to working in diverse domains aligned with the research objectives.

#### RECENT EXPERIENCE

**Chief Technical Officer** 

08/2024 - Present

CS Meta Limited, Dhaka, Bangladesh

Full-time - Onsite

Domain: Strategic Technology Planning, Project Management, Financial Analysis for IT Investments, SWOT Analysis, Stakeholder Alignment, Innovation and Digital Transformation Leadership, Data-Driven Decision Making

**Customer Relationship Manager** 

12/2024 - Present

IT Nova LLC, Maryland, USA

Part-time - Remote

Domain: Customer Engagement and Retention, Strategy Implementation, Customer Experience Optimization, Data-Driven Client Insights, Client Relationship Development,

**Project Manager, Talent Acquisition Specialist** 

06/2024 - Present

Genmorphics AI Solutions, Dhaka, Bangladesh

Part-time - Remote

Domain: Project Management, Talent Management, Strategic Planning, Financial Analysis, SWOT Analysis

**AI Developer** 

05/2024 - 10/2024

Web and More Limited, Blackpool, United Kingdom

Part-time - Remote

Part-time - Remote

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

**Machine Learning Engineer** 

09/2023 - 03/2024

Omdena, Toronto, Canada 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.

**Undergraduate Teaching Assistant** 

11/2017 - 04/2019

University of Liberal Arts Bangladesh

Part-time - Onsite

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

#### **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

#### **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.

#### 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

**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.