# Md. Nasif Sarwar

# Objective

Passionate and driven graduate seeking to further my expertise in Artificial Intelligence & Data Science through a Graduate program. With a strong foundation in data science, hands-on experience in AI projects, and a proven track record of academic excellence and leadership, I aim to contribute to cutting-edge research and innovative solutions. Eager to collaborate with esteemed faculty and leverage advanced resources to make significant advancements in AI

#### Education

# **Daffodil International University**

Sept 2020 - Oct 2024

BS in Software Engineering

o GPA: 3.94/4.0

o Major: Data Science

# Birshreshtha Noor Mohammad Public College

2018

Higher Secondary School Certificate (HSC)

GPA: 3.58/5.0 Group: Science

# Birshreshtha Noor Mohammad Public College

2016

Secondary School Certificate (SSC)

GPA: 4.28/5.0 Group: Science

# Experience

#### Data Science Intern

Dhaka, Bangladesh

 $Somikoron\ AI$ 

Jan 2024 - March 2024

- Developed and deployed advanced web scraping algorithms using technologies such as Selenium, Scrapy, and Beautiful Soup.
- Conducted data collection, cleaning, and analysis for various data science projects, integrating machine learning models for enhanced analytics.

# Office Secretary

Dhaka, Bangladesh

Data Science Club, DIU

March 2023 - Running

- Organized and coordinated various club events and workshops, including Data Science in Industry and Women in Data Science seminars, ensuring smooth execution and high participant engagement.
- Managed communication and logistics between club members, executive members, and industry professionals, fostering collaboration and enhancing the club's educational initiatives.

#### **Data Annotator**

Dhaka, Bangladesh

Jan 2022 - Dec 2022

Data Science Lab, DIU

- Performed image and text data labeling for machine learning models, enhancing the accuracy of datasets used in research projects
- Used tools like LabelImg and VGG Image Annotator (VIA) to annotate datasets, ensuring high-quality input for model training.

#### Research and Publication

# Optimizing Intrusion Detection with Hybrid Deep Learning Models and Data Balancing Techniques

- Used CNN+DNN, Autoencoder+DNN, and DNN+XGBoost. Intersected SHAP & correlation studies for feature selection and CTGAN, SMOTE & Generative AI for data balancing.
- Paper accepted at the 4th IEEE International Conference on AI in Cybersecurity (ICAIC), University of Houston, 5-7 February 2025.

# **Projects**

# Bangla Sign Language Detection & Translation

• Developed a system for Bangla Sign Language Detection and Translation using deep learning. **Tools Used:** ResNet50, VGG19, and MobileNet for sign language detection and translation using Google Translate API.

# Pneumonia Detection from Chest X-rays

 Created a deep learning model for detecting pneumonia from chest X-rays, enhancing early diagnosis and treatment accuracy. Tools Used: Inception V3, Custom CNN, and MobileNetV2

#### Tea Leaf Disease Detection

 Developed a machine learning model for tea leaf disease detection using data collected directly from fields, improving early identification and treatment of crop diseases. Tools Used: CNN + SVM, DNN+XGB

# Training Portal (Website)

• Developed a teaching portal for managing courses and evaluations. Tools Used: Laravel, MySQL, JS.

#### DaamDor

 Developed an application with a dashboard showing price comparison and data analysis of different markets in an area. Tools Used: Java Swing, MySQL Database

# Awards & Competition

- Mujib 100 Idea Contest(National Contest): Led a team, securing a top 100 position out of nearly one million participants, demonstrating exceptional leadership and innovative problem-solving skills.
- o Participated in programming contests like DIU Inter University Programming Contest, Leetcon, etc.
- $\circ\,$ Robi Datathon 3.0 participant

# Extracurricular

- o In organizing team of 1st International Cyber Security Conference from Bangladesh MIST LEETCON 2023
- o In organizing team of Data Science & AI Startup Boot Camp 2024
- o In organizing team of Cyber Security Awareness Day 2024
- $\circ\,$  In organizing team of 3RD DIU DATA SCIENCE SUMMIT 2022

#### Certifications

- Neural Networks and Deep Learning by DeepLearning.AI (Coursera)
- Foundations of Data Science by Google (Coursera)

# Language Proficiency

o IELTS: Overall Band Score 7.5 (Listening 8, Reading 7.5, Writing 7, Speaking 7.5)

#### Skills

**Programming:** C/C++, Python, R, SQL, Java, HTML, CSS, PHP

Machine Learning Libraries: Scikit-learn, TensorFlow, PyTorch

Data Analysis & Visulization: Pandas, NumPy, Matplotlib, ableau, Power BI, Plotly, ggplot2.

Research: Overleaf, Elicit, Mendeley, Zotero