# **Ahamed Safnas**

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### **Profile**

Recently BEng graduated in Computer and Information Systems Engineering with a strong academic foundation experience in Machine Learning, Artificial Intelligence and Data Science. Proven ability to conduct research, analyze data, python programming and communicate effectively through internships and volunteer work.

#### **EDUCATION**

# **B.E. Computer & Information System Engineering,** NED University

2021 - 2025

**CGPA: 3.7/4.0**, (Merit-based Allama Iqbal Scholarship recipient)

**Courseworks**: OOP, Data Structure & Algorithms, AI, ML(Deep learning, Neutral Network), Calculus, Linear Algebra & Differential Equation, Probability & Statistics, Discrete Structure, Computer Vision, Bio-informatics

GCE A/L - Physical Science, D.S. Senanayake College

2017 - 2019

Z-score: 1.8025

# **EXPERIENCE**

### Data Science Intern, NED University

09/2024 - 12/2024

- Analyzed 40,000+ real-time PM2.5 and PM10 air quality records using **Python**, performing data cleaning, feature engineering, and visualization.
- Built predictive models (**Linear Regression, ARIMAX, FB Prophet**) to forecast pollutant trends with performance evaluation using RMSE, MAE, and R<sup>2</sup>.
- Delivered actionable insights through **Power BI** dashboards and visual reports to support environmental monitoring.

## Python Developer Intern, NCL-NED

04/2023 - 07/2023

- Developed a REST API for real-time text extraction from images using OpenCV
- Tested and validated the API with **Postman** to ensure accuracy and seamless user experience.
- Deployed the solution on Google Cloud Platform (GCP), optimizing performance and response time.

# **TECHNICAL SKILLS**

Languages: Python, JavaScript, SQL, HTML, CSS

AI/ML Frameworks & Tools: TensorFlow, Keras, OpenAI API, Hugging Face Transformers, LangChain, RAG, Pandas

MLOps & Deployment: Git, Google Cloud Platform, AWS, Jupyter, Colab, FastAPI, REST APIs

Database: PostgreSQL, MySQL, MongoDB

Web & App Integration: React.js, Next.js, Node.js, Express.js

Soft Skills: Problem Solving, Team Collaboration, Analytical thinking, Communication, Rapid Learning, Critical

Analysis, Adaptability

Model Evaluation & Tuning: Cross-validation, Hyperparameter Tuning, Model Metrics

# **PROJECTS**

#### **Potato Disease Classification with Deep Learning,** *Python*

- Developed a **CNN-based deep learning model** to classify potato leaf diseases (*early blight*, *late blight*, *healthy*) using **TensorFlow**, improving early disease detection for farmers
- Collected and preprocessed image datasets, applied **data augmentation** (rotations, flips, contrast adjustments) to enhance model robustness.

- Built a **FastAPI backend** with TensorFlow Serving for scalable inference and deployed it using **Docker** for containerization.
- Optimized model for edge devices by converting to **TensorFlow Lite** (quantization for faster, smaller models).
- Designed a **React.js web app** for image uploads and a **React Native mobile app** for real-time field predictions.
- Deployed the solution on Google Cloud Platform (GCP)

### **Al Image Generator,** *Python* □

- Built a Streamlit app to create product ad images from text or photos using Bria's image generation API
- Added features like background removal, shadow effects, lifestyle scenes, and CTA overlays
- Designed a clean, customizable UI for quick image editing and download

## **Loan Approval Prediction Web App,** *Python, FastAPI* ☑

- Developed an ERP-style ML tool for automating loan approvals.
- Built ML models (Logistic Regression, Decision Tree, Random Forest) achieving 86.18% accuracy.

### **House Price Prediction,** *Python, Scikit-learn* □

- Preprocessed housing datasets and trained a Random Forest Regressor.
- Achieved superior performance compared to linear models using RMSE and R<sup>2</sup> metrics

# **Real-Time Object Detection App,** *Python*

- Developed a real-time object detection web app with YOLOv8 and Flask
- Streamed annotated webcam video in-browser with a clean, customizable interface.

#### **CERTIFICATES**

AI Fundamentals ☑

• Data Scientist Associate 🛮

Data Analyst Associate

#### **LANGUAGES**

English, Tamil, Sinhala, Urdu

# **Extracurricular Activities & Memberships**

- University-level Cricketer
- Member, IEEE Student Branch
- Member, IEEE WIE Society

### **REFERENCES**

**Dr. Maria Waqas**, *Assistant Professor*, NED University of Engineering & Technology, Karachi mariaw@neduet.edu.pk

**Dr. Urooj Ainuddin**, *Assistant Professor*, NED University of Engineering & Technology, Karachi uroojain@neduet.edu.pk