

# **Muhammad Farooq**

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#### ABOUT ME

A highly skilled AI Engineer with a strong foundation in Computer System Engineering. Experienced in machine learning, deep learning, and generative AI, with expertise in NLP, computer vision, and AI-driven automation. Passionate about developing innovative AI solutions, optimizing data-driven models, and deploying scalable AI applications. Proficient in Python, TensorFlow, PyTorch, and cloud-based AI technologies, with a focus on cutting-edge AI research and development.

## WORK EXPERIENCE

■ – ISLAMABAD, PAKISTAN

# AI ENGINEER (ITSOLERA ISLAMABAD) – CURRENT

- Developed ML models using supervised, unsupervised, and generative techniques .
- Built Al solutions (e.g., sentiment analysis) with expertise in data preprocessing, training, and evaluation.
- Used TensorFlow, PyTorch, and Hugging Face to optimize model performance for real-world use.

**Ⅲ** – ISLAMABAD

# AI & MACHINE LEARNING(DEVELOPERSHUB CORPORATION) - 01/03/2025 - 25/04/2025

- Participated in a six-week virtual internship focused on Al & Machine Learning.
- Demonstrated strong technical skills and consistent performance in assigned tasks.
- Contributed significantly to projects and showed excellent learning and adaptability.

# **INTRODUCTION TO AI CONCEPTS (MICROSOFT)**

- Studied core AI concepts such as machine learning, neural networks, and natural language processing.
- Explored real-world applications of AI and its ethical implications in modern industries.
- Completed structured learning modules and assessments to validate foundational AI knowledge.

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## TRAIN AND EVALUATE DEEP LEARNING MODELS(MICROSOFT)

- Gained hands-on experience in building, training, and validating deep learning models.
- Learned to apply frameworks and tools to optimize model performance.
- Evaluated models using metrics and improved results through tuning and regularization.

## SKILLS

Python | Pandas | Numpy | Seaborn | Scikit-learn, Keras, TensorFlow | Matplotlib | ML | Deep Learning | ANN | CNN | RNN | LLM | BERT | LSTM | TRANSFORMER | Fine Tuning | Hugging Face | Langchain | RAG | Agentic AI | Streamlit | FastAPI | Computer Vision | Flask | Chroma DB | Pinecone DB | OpenCV | NLP | YOLO | MediaPipe | Selenium | Requests

## PROJECTS

AI-Based Facial Recognition System with Roll Number Identification for Secure Authentication.

- Developed a mini AI project utilizing facial recognition technology for secure authentication.
- Integrated roll number identification to enhance accuracy and efficiency in user verification.
- Leveraged deep learning models to ensure robust and reliable facial recognition for authentication systems.

# Designed Al-powered resume-job matching system.

- Designed and developed an Al-powered resume-job matching system to automate recruitment.
- Utilized NLP and machine learning to analyze resumes and match candidates with jobs.
- Enhanced hiring efficiency and accuracy through Al-driven skill-based matching.

# Developed a secure locker system with fingerprint, PIN, facial recognition, and image capture

- Designed and developed a three-layer authentication system combining fingerprint, PIN, and facial recognition.
- Integrated image capture to record authentication attempts and prevent unauthorized access.
- Utilized deep learning and biometric verification to ensure a robust and secure locker system

## **Breast Cancer Detection project Using Machine Learning.**

- Developed a machine learning-based breast cancer detection system for early diagnosis.
- Used feature selection and classification models to improve detection accuracy.
- Implemented SVM, Random Forest, and CNN to classify benign and malignant tumors.

# Al-Based Weather Forecasting System project.

- Developed an Al-based weather forecasting system for accurate climate predictions.
- Used machine learning and time-series analysis to analyze weather patterns.
- Improved forecasting accuracy with historical data and deep learning models.

## AI-Powered Web Scraping Tool for Smart Data Extraction

- Al-powered web scraping with BeautifulSoup and Selenium.
- Extracts and processes structured data from URLs.
- Easy-to-use interface for visualization and export.

#### Multi-Modal RAG PDF Processor

- Extracts text and images from PDFs, including scanned documents, using PyMuPDF and Tesseract.
- Uses BLIP for image captioning and RAG (FLAN-T5 + FAISS) for answering questions contextually.
- Offers an interactive Gradio interface for uploading, summarizing, and querying PDF content.

## **Vehicle Detection & Counting System using YOLOv8**

- Uses YOLOv8 to detect vehicles such as cars, buses, trucks, and motorbikes in real-time from a video.
- Counts each vehicle once as it crosses a defined horizontal line, using position tracking to avoid duplicates.
- Records the vehicle type, detection time, and bounding box, and saves all data into a CSV file for analysis

#### EDUCATION AND TRAINING

15/03/2020 - 16/12/2024

BE COMPUTER SYSTEM ENGINEERING Balochistan university of engineering and technology khuzdar

15/05/2018 - 30/01/2020

FSC PRE ENGINEERING Govt Islamia collage civil line lahore

#### LANGUAGE SKILLS

Mother tongue(s): **PASHTO** 

Other language(s): **ENGLISH** | **URDU**