

# Owais Ahmed

## Software Engineer

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### EDUCATION

**Bachelor of Engineering**, *NED University Of Engineering and Technology* ☑ 2019 – 2023 | Karachi, Pakistan  
Major in Computer and Information Systems Engineering.  
**Cumulative GPA:** 3.63/4.0  
**Relevant Coursework:** Software Engineering; Artificial Intelligence; Machine Learning

### PROFESSIONAL EXPERIENCE

**Sibisoft (Pvt.) Ltd**, *Software Engineer (AI/ML)* ☑ Jan 2024 – present | Karachi, Pakistan

- Designed and implemented Django backend solutions for seamless front-end communication.
- Developed backend using Django as framework combined Langchain to enhance system efficiency and intelligence.
- Developed and maintained multi-action agents with Langchain for responsive chatbot functionalities.
- Integrated Langsmith for traces for agents.

**Rehani Soko**, *Machine Learning Engineer* ☑ Jan 2023 – Dec 2023 | Washington, U.S.

- Engineered a data collection pipeline from global real estate websites.
- Implemented pipeline to predict house prices on various parameters using time series model.
- Developed a real estate chatbot using OpenAI, Flask, and Langchain. Created and maintained backend APIs.

**My AskAI**, *Python AI Developer (Backend)* ☑ Feb 2023 – Nov 2023 | London, England

- Developed a robust backend infrastructure using Python and Quart for My AskAI.
- Designed APIs to interface with OpenAI, managed embeddings in a vector database & integrated bots for WhatsApp and Discord.
- Orchestrated backend flow for text extraction, embedding generation, and storage, enabling efficient Q&A capabilities.
- Designed a system where the client can fine-tune the LLM model on his data and use the LLM for chat

**CrossWing Inc.**, *Machine Learning Engineer* ☑ Jun 2022 – Jan 2023 | Ontario, Canada

- Trained vision models to automate car workshops, implementing YOLOv4 and YOLOv7 for object detection and DeepSORT for enhanced tracking contributing to workshop automation.
- Data collection for car parts to train demand forecasting models.
- Developed various regression models for demand forecasting, including BlockRNN, Catboost, and XGBoost, optimizing inventory management and resource allocation.

**Profecia Links**, *Junior Software Engineer* ☑ Apr 2021 – Jul 2022 | Dubai, UAE

- Developed, implemented, and maintained web scrapers in JavaScript for extracting data from various e-commerce websites.
- Collaborated with the team to ensure efficient and accurate data extraction based on project requirements.

### RESEARCH EXPERIENCE

**NED University of Engineering and Technology**, *Bachelor's Thesis* ☑ Aug 2022 – Aug 2023

The Final Year Design Project aims to improve object grasping and manipulation in warehouses. It features an autonomous robotic arm that efficiently retrieves items from any defined place using dual monocular cameras for 6D object pose estimation and machine learning for grasping strategies. This system enhances warehouse productivity by handling object-picking tasks without human intervention, showcasing significant advancements in robotic manipulation.

**Independent Research** Jan 2024 – present

Conducting independent research on large language models to explore their potential applications and advancements.

### PUBLICATIONS

**An Integrated Approach to Robotic Object Grasping and Manipulation using 6D pose estimation**, *Zenodo* ☑ Aug 2024

This paper presents a novel robotic system designed to tackle the challenges of object grasping and manipulation in warehouse environments. Addressing the complexities of uncertain object positions within shelves, the proposed system autonomously retrieves items from a defined place with high efficiency.

## PROJECTS

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### **Facial Emotion Detection**, *Personal Project* [↗](#)

Facial Emotion Detection using YOLOv8 uses a custom-trained YOLOv8 model to identify various facial emotions from images or webcam feeds. The dataset, collected and annotated on Roboflow, ensures robust and accurate emotion detection.

Dataset URL: Human Facial Emotions Dataset on Roboflow [↗](#)

### **ActionVision: Deep Learning for Action Recognition**, *Personal project*

The project leverages the power of MoviNets to recognize and understand human actions in videos trained on Penn Actions dataset.

### **Road Object Detection and Tracking with DeepSORT and YOLOv7**, *Personal project*

The project is designed to enhance road safety and traffic management by accurately detecting and tracking objects on roads and highways. Uses YOLOv7 and DeepSORT for object detection on BDD100K dataset.

### **DataWizard**, *Llama3 Hackathon* [↗](#)

Welcome to DataWizard, your go-to assistant for all things data science! This project leverages the power of Llama 3 through Together AI and Groq APIs to assist users in their data science tasks with ease. DataWizard employs the pandasai agent for data manipulation and analysis and offers an intuitive UI developed in Streamlit.

### **AI Speech Bot**, *Yellowworks* [↗](#)

This project consists of a React-based frontend that listens to user queries, sends them to a Flask backend, and receives responses generated by a locally set up Llama3 language model.

### **Human Sense Ads**, *Yellowworks* [↗](#)

Human Sense Ads is a project designed to detect humans, extract their features, and generate personalized messages using a language model (LLM) to grab their attention towards advertisements displayed on a screen

### **AI Assistant Builder**, *Personal project* [↗](#)

A platform for building AI assistants capable of responding to human inquiries based on data provided to them.

## INTERNATIONAL HACKATHONS

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### **Llama 3 AI Hackathon** [↗](#)

**Objective:** Develop an innovative AI-powered solution using Llama 3

**Project Name:** DataWizard, Your Data Science Assistant **[Demo]** [↗](#)

**Key Contributions:**

- Led the development and AI team in the 48-hour hackathon
- Utilized Pandas AI Agent for backend development
- Designed and developed a simple, intuitive UI using Streamlit and also deployed it.

## TEACHING EXPERIENCE

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### **iCodeGuru**, *Moderator & Trainer* [↗](#)

- Serving as a volunteer trainer at ICodeGuru, a platform established by Silicon Valley engineers to support underprivileged students in Pakistan.
- At ICodeGuru, we teach, train, mentor, and guide students from deprived areas of Pakistan to enhance their professional skills. I teach coding to these students and help them solve Leetcode problems.

## HONORS AND AWARDS

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- Winner of company wide hackathon at Sibisoft, 2024.
- Top Rated Freelancer at Upwork, 2023. [↗](#)
- 100% Job Success Badge at Upwork, 2021.
- Participant of C# Fellowship at Mindstorm Studios, 2020.
- Recipient of NED Alumni Association of Houston Scholarship, 2020.

## ADDITIONALS

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**Test Scores** — Duolingo English Test (135/160)

**Programming Languages** — Python, JavaScript

**Frameworks** — React, Node, Flask, Django, Streamlit, FastAPI, Tornado, Quart, Gradio

**Developer Tools** — Git, Docker, VS Code, Jupyter, PyCharm, Postman, Mantis, Jira

**Machine Learning Skills** — Computer Vision, Demand Forecasting, LLMs, NLP

**Databases** — MongoDB, MySQL, PostgreSQL, Vector Databases

**Libraries** — Langchain, Pytorch, Keras, TensorFlow, Scipy, Bokeh, PyBrain, Langsmith