# Omer Khan Jadoon

Generative AI Engineer

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Results-driven Generative AI Engineer with 3+ years of profound experience in artificial intelligence, data science and machine learning. Proficient in Python, Vector DBs, LLM Frameworks and Cloud Deployments.



#### **Technical Skills**

Programming Languages: Python, JavaScript, C++, Java, SQL,.

Frameworks & Tools: TensorFlow, PyTorch, LangChain, LlamaIndex, Streamlit, Flask, Django.

**Generative AI Technologies**: Open-source and paid LLM models (Llama3, Mistral, OpenAI, Google Gemini Pro,Perplexity), Multimodal LLMs, Audio Language Models, Video Language Models (VLMs), Diffusion Models, GANs.

Vector Databases: ChromaDB, Pinecone

Database Management: Experience with Cosmos DB in production environments, Mysql, Mongodb, PostgreSQL, Firebase

Deployment Platforms: Azure Ai, AWS (EC2, Lambda), Azure Functions, Hugging Face Spaces

**Al Techniques**: Fine-tuning with custom data, Retrieval Augmented Generation (RAG), vector embedding, neural network optimization, MLOPS, Dockers, Kubenetes, prompt engineering and optimization.

Traditional AI: Computer Vision, NLP, Machine Learning, Deep Learning, DNN.

Project Management Tools: Notion, Jira, Confluence

Soft Skills: Analytical thinking, problem-solving, teamwork, effective communication.

## **Experience/Projects**

Amidiro GmbH December 2023 – Present

Generative AI & Machine Learning Consultant

Aachen, Germany

- Lead the Development of Amidiro Audio Assistant which helps businesses/hospitals to provide support and do
  marketing and support calls using LLMs and which increase the lead conversion rate by 20%, and reduce the call
  handling time by 15%.
- Fine tuned YOLO v9 on FireNet Dataset and Developed a pipeline to generate Safety & Maintenance Report using LLM.
- Developed a data pipeline to extract important information from Company register (Handelsregister) using OpenAI ChatGPT and store it to AWS DynamoDB.
- Developed and conducted training regarding prompt engineering and fine tuning of LLMs.
- Build a Retrieval-augmented generation (RAG) pipeline for Amidiro Internal Knowledgebase to help consultants.
- Developed Basic and Advance Training about Prompt Engineering and RAG focusing on latest research.
- Knowledge retrieval from recent Research Papers and integration into the Knowledgebase.

Remote Native GmbH April 2023 – October 2023

Werkstudent Artificial Intelligence and Data Science

Munich, Germany

- Generated Synthetic dataset using LLMs from ~5 Million e-commerce dataset, to train custom BERT model for Named Entity Relations (NER) task.
- Finetuned Segment Anything model to do **image segmentation** and remove background from images. Also created an interface for this in streamlit.
- Performed Image Analysis by extracting segments using finetuned Segment Anything model.
- Developed a Restful API service for converting video of Product to 3D objects.
- Created MLOPs pipeline in Azure Databricks to Extract Transform Load (ETL), Model Training and Deployment.
- Developed a Virtual tryon Application Using Computer Vision for different clothes and color variations of product.

#### **Advance Telecom Services (ATS)**

July 2022 - April 2023

Artificial Intelligence Engineer

Remote, USA

- Set up fine-tuning and evaluation pipelines on Microsoft Azure.
- Trained Custom Computer Vision and NLP Models and Deployed them on Azure Cloud.
- Developed an Advanced Recommendation System for car dealership stores.
- Developed Generative AI Training and conducted training sessions with universities.
- Worked on Data Pipelines, ETL, Batch Scoring, Stream Processing, Visualization using Power BI.

## **National Radio & Telecommunication Corporation (NRTC)**

Assistant Manager Artificial Intelligence Lab

Haripur, Pakistan

October 2021 - June 2022

- Build the AI and BigData Lab with a private cloud for KPK Police, Pakistan.
- Worked on Development of OSINT for Social Media and Criminals Analysis.
- Trained an AI based Forecasting AI to forecast any possible crime in an area.
- Build Interactive Dashboards in Qlik Sense and a custom ETL system for Telecommunication Data.
- Developed Link Analysis Platform to analyze the activities of Terrorist Groups in Pakistan.
- Development of Facial Recognition System (FRS), Automatic Number Plate Recognition System.
- Lead a team of 5 People

#### **Jadoon Technologies Private Limited (JTPL)**

Nov 2020 - OCT 2021

Haripur, Pakistan

- Lead Software Engineer
  - Developed Cross Platform Mobile and web apps using Next JS, React JS, ASP.NET as well as Django.
  - Web Scraping, Data Analytics, Exploratory Data Analysis.
  - Data Ingestion, Training ML and DL based models for visual analysis, emotion detection, and road safety.

### **Projects/Awards & Achievements**

Safira.AI: AI based Ecommerce Platform   LLMs, Image Analysis, Segmentation, Azure AI	April 2023 - Sep 2023
<u>Product Recommendation and Search</u> : Image based Search / Collaborative Filtering, Siamese network	Jan 2023 - Mar 2023
Material Defect Detection: Defects in Construction Materials   Deep Learning	Oct 2022 - Dec 2022
Brain Tumor Detection: Segmentation of Infected Area / U-NET, Segmentation, Azure AI	July 2022 - Sep 2022
Facial Recognition System & ANPR: Catch People on RedBook with various city cameras / YOLO-Face	Jan 2022 - May 2022
<u>Criminal Investigation System (CIS)</u> : Terrorists Activity Monitoring and Forecasting   Django, Qlik Sense	Nov 2021 - April 2022
Cow Diseases Prediction: Computer Vision based Skin Diseases Predictions / CNN, Transfer Learning	Nov 2020 - Feb 2021
<u>Detection of Osteoarthritis in Knee</u> : <u>Detect Severity according to KL Scale</u>   ResNET, Fine Tuning	Jan 2020 - May 2020

## **Education**

Friedrich-Alexander-Universität (FAU)

Master of Science in Artificial Intelligence

OCT 2022 – Present

Erlangen, Germany

The University of Haripur

Bachelors of Science in Software Engineering

**SEP 2016 - OCT 2020** 

Haripur, Pakistan