

# Hussain Nasir Khan

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🐙 <https://github.com/HussainNasirKhan>

## Skills

Generative AI, Data Science, Data Analysis, Computer vision (Object Detection, Segmentation, Classification, Recognition, Image Generation), Deep learning, Machine learning, Natural Language Processing, Image Processing, Data Annotation

Python, Keras, TensorFlow, PyTorch, Scikit-learn, AWS, OpenCV, SQL, NLTK, Pillow, NumPy, Pandas, Matplotlib, Plotly, Seaborn, LabelImg, LangChain, Astra DB, Ollama, LLMs (Llama3.1, Llava, GPT-4, GPT-4 Turbo, GPT-4o, Mistral, Gemma2, Qwen2, Deepseek-coder-v2, Phi3)

## Professional Experience

### Software Engineer, InvoZone

03/2024 – 08/2024

Remote

- Automated report generation using OpenAI API and web scraping.
- High-quality Image generation using Stable Diffusion and GANs.
- Conducted stock analysis using Yahoo Finance API, Ollama, and Llama3.
- Designed ML models for fraud detection in Tahometer data.
- Developed AI camera system for insurance agents with Zero-Shot Object Detection Models (Grounding Dino and OWL-V2) and Image segmentation using SAM

### Senior Artificial Intelligence Engineer, Horizon Tech Services Pvt. Ltd

02/2023 – 03/2024

Islamabad, Pakistan

- Developed and optimized robust object detection algorithms for diverse use cases.
- Implemented state-of-the-art deep learning models, including CNNs, for exceptional object detection.
- Collaborated with cross-functional teams to define project objectives and manage resources.
- Conducted data analysis and preprocessing to address class imbalance, occlusion, and lighting challenges.

### Founder, AiHints

10/2020 – present

- Founded and established a highly regarded website dedicated to providing comprehensive content and resources in the field of computer vision and artificial intelligence.
- Developed and implemented a strategic vision for the website, positioning it as a go-to platform for industry professionals, researchers, and enthusiasts seeking knowledge and insights in computer vision and AI.
- Managed a team of content creators and contributors, providing guidance, feedback, and support to ensure the consistent delivery of high-quality content.

### Industrial Engineering Intern, Heavy Mechanical Complex

07/2019 – 08/2019

Taxila, Pakistan

- Acquired Knowledge of industry environment and different departments of HMC
- Learnt about Boilers, material handling equipment, and other Machines
- Incorporated solutions that met various project challenges.

## Education

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### **M.S. Robotics and Intelligent Machine Engineering, *NUST Islamabad***

Project Title: Multimodal 3D-MRI Brain Tumor Segmentation via Modified 3D U-Net with Transformer

Supervisor: Dr. Kashif Javed

### **B.Sc. Industrial Engineering, *UET Taxila***

Project Title: Design and Development of Automated Pharmacy

Supervisor: Dr. Salman Hussain

## Invited Talks & Awards

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### **[Guest Speaker] Workshop on Computer Vision**

National Intelligence Academy, Islamabad, Pakistan

### **[Guest Speaker] Workshop on Artificial Intelligence**

National Intelligence Academy, Islamabad, Pakistan

### **[Guest Speaker] Workshop on AI and its Impact on Intelligence Gathering**

National Intelligence Academy, Islamabad, Pakistan

## Projects

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### **Stock Comparison Tool Powered by 10 Open Source LLMs**

<https://github.com/HussainNasirKhan/Stock-Comparison-Tool-Powered-by-10-Open-Source-LLMs>


### **Chat with Multiple PDF Documents with Langchain and Gemini Pro**

<https://github.com/HussainNasirKhan/Chat-With-Multiple-PDF-Documents-With-Langchain> 


### **Person Detection in Restricted Zones Using YOLOv10**

<https://github.com/HussainNasirKhan/Person-Detection-in-Restricted-Zones-Using-YOLOv10> 


### **Nutritionist Generative AI Doctor using Gemini Pro Vision**

<https://github.com/HussainNasirKhan/Nutritionist-Generative-AI-Doctor> 


### **YouTube Video Transcribe Summarizer LLM App**

<https://github.com/HussainNasirKhan/Gemini-YouTube-Video-Summarizer> 

### **Resume Applicant Tracking System (ATS)**

<https://github.com/HussainNasirKhan/Resume-ATS-with-Google-Gemini-Pro> 

### **MultiLanguage Invoice Extractor**

<https://github.com/HussainNasirKhan/MultiLanguage-Invoice-Extractor-using-Generative-AI> 

### **Stock Data Analyzer with Llama3 Integration**

<https://github.com/HussainNasirKhan/Stock-Data-Analyzer-with-Llama3-Integration>

### **Automated Report Generation**

LLMs, Web Scraping, LangChain, PyPDF2, BeautifulSoup, Requests


### **OCR - Convert Image to Text**

<https://github.com/HussainNasirKhan/OCR-Convert-Image-to-Text> 

### **Facial Expression Recognition**

<https://github.com/HussainNasirKhan/Facial-Expression-Recognition> 


### **Netflix Movies Analysis with Python, Pandas, and Matplotlib**

[https://github.com/HussainNasirKhan/Netflix\\_Movies\\_Analysis](https://github.com/HussainNasirKhan/Netflix_Movies_Analysis) 


### **Time Series Forecasting of Gold Price**

<https://github.com/HussainNasirKhan/Time-Series-Forecasting-of-GoldPrice> 

### **Crop Yield Prediction using Machine Learning with scikit-learn**

<https://github.com/HussainNasirKhan/Crop-Yield-Prediction> 

### **AgroAdvisor: A Smart Crop Recommendation System**

<https://github.com/HussainNasirKhan/Crop-Recommendation-System> 

### **Heart Disease Prediction using Machine Learning**

Classification, scikit-learn

### **Multimodal 3D-MRI Brain Tumor Segmentation via Modified 3D U-Net**

3D MRI Data, 3D U-Net, Vision Transformers, TensorFlow

### **Mental Health Chatbot - Mind Ease**

AstraDB, Langchain, OpenAI API, LLM

### **High-quality Image Generation**

Stable Diffusion, GANs, Kaggle (GPU P100)

### **Tahometer Fraud detection**

Image Processing, Machine Learning

### **AI Camera System for Insurance Agents**

Zero-Shot Object Detection (Grounding Dino and OWL-V2), Segmentation (SAM)

### **Image Masking Web Application**

<https://github.com/HussainNasirKhan/Image-Masking-Web-Application>

### **Face Recognition System**

<https://github.com/HussainNasirKhan/Face-Recognition-System> 

### **Image Captioning using LLaVA Multimodal**

<https://github.com/HussainNasirKhan/Image-Captioning-using-LLaVA-Multimodal> 