

#### ARTIFICIAL INTELLIGENCE ENGINEER · DATA SCIENCE EXPERT

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"Don't watch the clock; do what it does. Keep going."

## **Summary**

Result-oriented Data Scientist with expertise in machine learning, NLP, and generative AI. Skilled in developing state-of-the-art conversational AI solutions, training large-scale NLP models, and analyzing datasets to drive business impact. Proven success in delivering scalable AI systems using frameworks like TensorFlow, PyTorch, and Hugging Face. Passionate about creating AI models that are ethical, user-centric, and enhance conversational experiences.

### **Education**

GIFT University

Gujranwala, Pakistan

BACHELOR'S OF SCIENCE IN COMPUTER SCIENCE

2019 - 2023

- Related Coursework: Machine Learning, Artificial Intelligence, Natural Language Processing, Data Structures and Algorithms, Database Systems.
- · First Position in Final Year Project, received funding from Ignite for project development

## Work Experience \_\_\_\_\_

Devster Labs Islamabad, Pakistan

ARTIFICIAL INTELLIGENCE ENGINEER

May. 2024 - Dec. 2024

- Developed and deployed Al-driven chatbots using Hugging Face and OpenAl, increasing customer query resolution by 10%.
- Optimized audio processing models, achieving a 3% reduction in processing time.
- Enhanced user engagement by 8% through generative AI applications.
- Increased customer query resolution by 10% using Hugging Face, Vertex AI, and OpenAI-based chatbot solutions.
- Achieved a 2% increase in sound event detection accuracy.
- Implemented cross-functional AI solutions, reducing integration time by 30%.
- Implemented and Deployed Weapon Detection and Anomalies Detection system in real-world Environment, resulting in 40% decrease in violence activities.

GIFT University Gujranwala, Pakistan

RESEARCH ASSISTANT & TENSORFLOW DEVELOPER

Feb. 2023 - May. 2024

- Implemented and Achieved 80% accuracy in sketch-to-image synthesis, surpassing state-of-the-art benchmarks.
- Enhanced CNN-based recognition by 5%, contributing to research publications and conferences.
- Developed a deep learning model using CNNs to analyze satellite imagery, achieving 85% accuracy in identifying poverty-stricken regions, and aiding in resource allocation for underserved areas.
- Specialized in GANs for diverse image synthesis, implementing advanced architectures like Pix2Pix and CycleGAN and more for Image-to-Image Translation.

CodSoft Kolkata, India

Machine Learning Intern - Remote

Oct. 2023 - Nov. 2023

- · Improved captioning accuracy by 13% using CNN-RNN architecture with Attention mechanisms.
- Enhanced recommendation systems' click-through rates by 25% through collaborative filtering.
- Integrated machine learning models like ChatGPT, Dall-E, Gemini and others into real-world applications using Flask REST APIs for seamless web application interaction.

## **Publications**.

#### 25th International Conference on Digital Image Computing: Techniques and Applications

Perth, Australia

LOCALLY-FOCUSED FACE REPRESENTATION FOR SKETCH-TO-IMAGE GENERATION USING NOISE-INDUCED REFINEMENT

2024

This paper introduces a novel approach for sketch-to-image generation, focusing on localized face representation with noise-induced refinement to enhance visual accuracy and realism

#### 3rd International Conference on Energy, Power, Environment, Control and Computing

Pakistan

LOCALLY FOCUSED MULTI-LEVEL FEATURES-BASED FRAMEWORK FOR POVERTY ESTIMATION

2024

This study proposes a novel multi-level feature extraction, fusion, and dual-attention mechanism framework for poverty estimation via satellite
imagery.

# **Projects**

Conversational AI Chatbot

- Tech: Python, TensorFlow, Hugging Face, OpenAI
- Created a highly accurate chatbot using transformer-based models like GPT-3 and BERT.
- Improved response quality by incorporating A/B testing and iterative fine-tuning.

#### **Human Sketch-to-Face Conversion**

2023

- Tech used: Python, Pytorch, GANs, CNN, Autoencoders
- · Developed a GAN-Autoencoder model to convert human sketches to realistic images with feature extraction techniques.

### **Sound Event Detection System**

2024

- · Tech used: Python, TensorFlow, Keras, Librosa
- Built a deep learning-based sound event detection system with 7% improvement in accuracy and reduced latency by 2% in real-time detection.

Other Projects 2024

- Tech used: Python, Sci-kit learn, Pandas, Numpy, PyTorch, CNN, RNN
- Developed and implemented a variety of machine learning models, including:
  - Image Segmentation using U-net, FCN-8 architecture
  - Image captioning with combined CNN-RNN architectures, with a 10% improvement in accuracy using attention mechanisms.
  - Recommendation systems for personalized content delivery, resulting in a 5% enhancement in recommendation accuracy.
  - Time-series forecasting for stock price prediction.
  - Transformer Models for Language Translation.

## **Skills & Interests**

Programming Languages Python, Latex, Java, C, C#

ML and Al Algorithms Natural Language Processing (NLP), Computer Vision (CNNs), Generative Adversarial Networks (GANs)

Tools and Frameworks TensorFlow, PyTorch, Flask, REST APIs, Git, Hugging Face, NLP Libraries (SpaCy, NLTK)

**Soft Skills** Problem Solving, Hardworking, Quick Learner

**Methodologies** Scrum, Agile Methodology

**Interests** Image Processing, Al Applications in Gaming, Audio Signal Processing, Machine Learning Research

**Languages** English (Fluent), Urdu (Professional), Arabic(Beginner)

**Hobbies** Video gaming, watching sports matches, Visiting Northern Areas, Cooking, and reading Books or Blogs

## **Certification's & Awards**

2024	TensorFlow Developer Professional Certificate, by Laurence Moroney	DeepLearning.Al
2024	Natural Language Processing Specialization, by Younes Bensouda Mourri	DeepLearning.Al
2023	<b>2nd Runner Up</b> , PAK-UK Academic Bridge and hosted by Comsats University	Pakistan
2022	Machine Learning Specialization, by Prof. Andrew NG.	Coursera

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