

# Muhammad Hassan Ibrar

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## RELEVANT

## SKILLS

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- **Programming Languages:** Python, SQL, C, C++.
- **Libraries:** TensorFlow, Keras, PyTorch, Scikit-learn, OpenCV, LangChain, Huggingface.
- **Web Development Frameworks:** Flask, Gradio, Django, Streamlit, Rest-framework.
- **Data Science Frameworks:** Pandas, NumPy, Matplotlib, Seaborn, BeautifulSoup, Kaggle.
- **Generative AI:** GANs, Stable Diffusion, Flux, Civit AI, LLMs, Llama.
- **Soft Skills:** Effective communication, Team leader, Event organization, Technical writing
- **Expertise:** Database, Data Structure, Algorithms, ML & DL, NLP, Generative AI.

## PROFESSIONAL EXPERIENCE

### MindBridge

August 2024 – Present

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#### *Stable Diffusion Developer*

- Developed an optimized system with Stable Diffusion Models using **Civit** and **ComfyUI**.
- Fine-tuned **Stable Diffusion 3** and **Flux LoRAs** for better image generation.
- Built back-end systems of refining prompts using **Ollama**, **Streamlit**, **google translate** and **pandas**.
- Optimized the generation process up to **45% less production time**.

### VITANA

May 2024 – August 2024

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#### *Python Developer*

- Built complete **Back-end** for **LLM** based web-app using **Django Rest-framework**.
- Contributed to the development of **RAG** agent using **ollama**, **langchain** and **llamaindex**.
- Improved responses by using better embedding and fast vector-bases.

### Elexoft

June 2023 – August 2023

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#### *Machine Learning Intern*

- Deployed **Django** web-app with **AWS** integrated with **threading**, **OCR**, **YOLO** and **Firebase**.
- Assisted in data per-processing and cleaning for training of **YOLOv8** and **Easy-OCR**.
- Assisted in Human Action Recognition models and their training using **PaddlePaddle**.

### Fiverr

December 2022 – Present

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#### *Machine Learning Developer*

- Conducted live AI product feasibility consultations with founders and investors
- Provided valuable guidance and proofreading for AI related thesis and dissertation
- Offered tailored consultation sessions with a 100% satisfaction rate from clients.

## EDUCATION

Ghulam Ishaq Khan Institute of Engineering Sciences and Technology

Sep 2020 - May 2024

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*Bachelor of Science | Artificial Intelligence | Partnered by Huawei*

- **CGPA:** 3.28 / 4.00
- 3 and 7 semester Dean's Honor List

### Relevant Courses:

- **CS421** – Data Structures and Algorithms
- **AS341** – Deep Neural Networks
- **AS351** – Introduction to Machine Learning
- **AS361** – Natural Language Processing
- **AS371** – Computer Vision
- **AS381** – Natural Language Processing
- **CS547** – Bioinformatics
- **CS575** – Data Science

## NOTABLE PROJECTS

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- **Chadbot for ML automation**  
Created a chatbot and integrated the chatbot with python scripts for data preprocessing and machine learning automation with complete EDA and charts. I handled the complete frontend using **streamlit** and backend using **django** of the project.
- **Smart Tutor**  
Developed an AI based intelligent system that transcribes videos using **wispher** and then embeds the text into a vector space for the **RAG** model to create a smart chatbot to study from any video in any language.
- **BeautyGAN**  
Fine tuned the beautyGAN model and developed an optimized webapp using **streamlit** to apply face beauty in real-time from the reference image to the target image.
- **Smart Segmenter**  
Built a smart segmentation application that creates the mask of any object described to the model that can be used for creating layers in the images and photoshop.
- **AI based Digital Human**  
Developed a digital human using **UNREAL ENGINE 5**, **MetaHuman** and **MetaHumanSDK** (software development Kit) capable of carrying out human like conversations and delivering news like a real newscaster with multiple accents and rooms along with many avatars.
- **Flood Detection using OpenCV**  
Developed an algorithm with the opencv to detect flood only using unsupervised learning with **90%** accuracy and is much faster than any other detection approach without training and model.
- **Attendance Management System**  
Developed an application that recognizes people using face attributes and marks their attendance and alerts authorities if any unknown person is detected trespassing.