

# Uzair Naeem

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## ABOUT ME

I am an enthusiastic AI and ML engineer with a robust background in mechatronics engineering. I have effectively applied machine learning, deep learning, and computer vision to address practical, real-world challenges. My experience includes the successful completion of various data science projects and certifications, highlighting my proficiency in essential tools and technologies. I am eager to embrace fresh challenges and contribute significantly to the field of artificial intelligence.

## EDUCATION AND TRAINING

01/10/2018 – 15/06/2022 Lahore, Pakistan  
**B.SC MECHATRONICS ENGINEERING** University of Engineering & Technology Lahore

People with disabilities often encounter challenges when they need to travel independently from one location to another. One common obstacle they face is the difficulty of ascending stairs, whether in public places or within their own homes. To address this issue, we developed a stair-climbing wheelchair equipped with environmental perception capabilities. This innovative wheelchair was able to identify the presence of stairs. When the user issues a command, it will autonomously navigate and climb stairs. On flat surfaces, the user will have full control over direction and speed, ensuring a seamless and user-friendly experience.

**Website** <https://www.uet.edu.pk/> | **Thesis** Autonomous Stair Climbing Wheelchair

01/02/2023 – 30/04/2023 Lahore, Pakistan  
**DATA SCIENCE BOOTCAMP** Programmers Force (Pvt) Ltd

During my time, at Programmers Force I delved into the realm of data and gained expertise in handling datasets using tools such as Numpy, Pandas, and Python. I became well versed in machine learning techniques utilizing Keras, Tensorflow, and Pytorch to develop models ranging from linear regression to neural networks. Additionally, I tackled projects by employing OpenCV for computer vision and image processing tasks. Overall I refined my skills, in data science by transforming knowledge into expertise

**Website** <https://pf.com.pk/>

## WORK EXPERIENCE

09/2023 – CURRENT Lahore, Pakistan  
**ASSOCIATE DATA SCIENTIST** STECH AI

- Developed an AI-powered recruitment assistant using Open AI models and Hugging Face library to automate the candidate selection process, resulting in a more efficient and accurate evaluation of candidate fit for job openings.
- Utilized natural language processing (NLP) techniques to analyze job descriptions and identify relevant skills and qualifications in candidate resumes, enabling the AI model to rank candidates based on their fit for a given role.
- Created a custom vector database like Qdrant and Chroma to store and query CVs based on their relevance to specific job openings, allowing for fast and accurate retrieval of relevant candidate information.
- Implemented a machine learning model to rank candidates based on their fit for a given role, reducing the need for manual review by recruiters and achieving an average accuracy rate of 73% in identifying suitable candidates
- Leveraged Hugging Face models for precise sentiment analysis, harnessing the power of fine-tuned Language Models (LLMs) tailored to specific contexts, resulting in the development of high-quality and customized solutions for targeted applications.
- Implemented the PEFT LoRA method to fine-tune various models, enhancing their performance while simultaneously reducing computational and storage costs, ensuring an efficient and resource-conscious approach to model refinement.
- Developed and utilized Langchain and Autogen to create autonomous agents with specialized tools, enabling complex LLM-based workflows through multi-agent conversations. This allowed for more efficient and effective collaboration between agents, leading to improved overall performance and productivity.

- As a member of the AI team, I was responsible for developing innovative artificial intelligence products, particularly focusing on a Know Your Customer (KYC) application for various industries.
- I worked on a state-of-the-art AI system that leveraged deep learning and natural language processing to solve complex problems and make accurate predictions based on large-scale data.
- I identified and analyzed the areas within the KYC application where the performance was suboptimal and the results were inaccurate.
- I extracted and prepared relevant data from the database using SQL queries and data manipulation tools, and cleaned and processed the data for further analysis.
- I designed, built, and trained a new model using advanced techniques and tools such as TensorFlow, PyTorch, and Scikit-learn to automate and improve the deficient AI steps.
- I conducted rigorous testing and validation of the model's performance using various metrics and methods, such as accuracy, precision, recall, F1-score, cross-validation, and confusion matrix.

## ● **DIGITAL SKILLS**

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Machine Learning Frameworks: TensorFlow, Keras, PyTorch, Scikit-Learn | NLP: NLTK, spaCy, Gensim, Hugging Face, Langchain | Web Frameworks: Django, Flask, FastAPI | Docker | Programming Languages: Python, C++ | Linux | Computer Vision: OpenCV | Git and GitHub | Databases: MySQL, PostgreSQL, MongoDB, Vector Database (Qdrant), Graph Database | SQL

## ● **ADDITIONAL INFORMATION**

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### **PROJECTS**

#### **Book Insights in a Glance: Langchain-Driven PDF Summarization with LLMs**

Link [https://github.com/UzairNaeem3/LLMs/tree/main/PDF\\_Summarizer](https://github.com/UzairNaeem3/LLMs/tree/main/PDF_Summarizer)

#### **Efficient LLM's Optimization: Falcon and Llama2 Fine-Tuning on Resource-Constrained Devices**

Links <https://github.com/UzairNaeem3/LLMs/tree/main/LLM's> | <https://huggingface.co/uzairnaeem>

#### **Autonomous Agents: An Exploration of Langchain and Autogen-Based Multi-Agent Systems for Large Language Models**

Link <https://github.com/UzairNaeem3/LLMs/tree/main/Agents>

#### **Image Enhancement with Denoising Autoencoders: An Investigation into Image Denoising Techniques for Improved Visual Performance**

Link [https://github.com/UzairNaeem3/Deep\\_Learning/blob/main/Denoising\\_Autoencoder.ipynb](https://github.com/UzairNaeem3/Deep_Learning/blob/main/Denoising_Autoencoder.ipynb)

#### **Forecasting Future Global Temperature Trends: A Time Series Analysis Approach**

Link [https://github.com/UzairNaeem3/Global\\_Climate\\_Temperature\\_Prediction](https://github.com/UzairNaeem3/Global_Climate_Temperature_Prediction)

### **CERTIFICATIONS**

#### **Data Science Mastery - IBM**

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Links <https://www.coursera.org/account/accomplishments/verify/XGK9KFWGVMQ9> | <https://www.coursera.org/account/accomplishments/verify/VJY8T9CS9XTJ> | <https://www.coursera.org/account/accomplishments/verify/4Z2PB75FRT3R> | <https://www.coursera.org/account/accomplishments/verify/JDV3PTAAEXFW>

#### **Natural Language Processing - DeepLearning.AI**

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Link <https://www.coursera.org/account/accomplishments/verify/MYEHWY4M6BHN>

#### **Machine Learning with Python - IBM**

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Link <https://www.coursera.org/account/accomplishments/verify/5DBA4CX9XXYD>

#### **Generative AI Learning Path - Google Cloud Skills Boost**

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Link [https://www.cloudskillsboost.google/public\\_profiles/73be2e70-e05c-48f4-bf56-73a80db8f1f9](https://www.cloudskillsboost.google/public_profiles/73be2e70-e05c-48f4-bf56-73a80db8f1f9)