

SOHAIB SULTAN

Data Scientist

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DHA Phase3, Lahore, Pakistan

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WORK & LEADERSHIP EXPERIENCE

Freelance Python Developer

Viztera Solutions

August 2024 – April 2025

Lahore, Pakistan

- Developed Python projects, focusing on analyzing large language model (LLM) outputs for Python-related prompts.
- Provided feedback to optimize prompt design, enhancing LLM performance in coding tasks.
- Strengthened skills in Python programming and LLM evaluation for practical applications.

Programming Instructor - STEM Education

Mechabotix

July 2023– August 2023

Lahore, Punjab

- Delivered programming instruction to students, emphasizing foundational coding skills in a STEM-focused curriculum.
- Designed hands-on lessons and projects to teach problem-solving and computational thinking.

Student Society Member (various roles)

VFP, IEEE Student Branch, Hult Prize

Nov. 2018 – 2022

Lahore, Pakistan

- Organizing Volunteer Force Pakistan's Event as Event Lead
- Organize IEEE events as team member
- Organize Hult Prize Event and Team member. Present idea to the audience and judiciary

PROJECTS

Preference Optimization in Language Diffusion Models

- Investigated Diffusion-DPO and DDPO to align LLaDA with human preferences using HelpSteer and HH-RLHF datasets.
- Evaluated model performance with BLEU, ROUGE, and Perplexity, enhancing text generation quality.
- Contributed to advancing NLP by adapting preference optimization for diffusion-based language models.

Interactive Image Segmentation with SIFT and GrabCut

- Feature Matching: Used SIFT for key point detection and homography for image alignment.
- Object Segmentation: Applied the GrabCut algorithm for accurate object segmentation.
- Interactive Tool: Developed a user-friendly interface for refining segmentation.

PROFESSIONAL COURSES

Associate Data Scientist Professional Certification

Datacamp

Dec 2022 – Feb 2023

Datacamp

CS50, Introduction of Programming with Python

Harvard University

June 2022 – Nov 2022

Edx

EDUCATION

MS. Data Science

Information Technology University, Lahore

08-2024 05-2026

Lahore, Pakistan

BSc. Mechatronics Engineering

University Of Engineering and Technology, Lahore

09/2018 – 08/2022

Lahore, Pakistan

RELEVANT COURSES

Advance Courses

Deep Learning

Big Data Analytics

Machine Learning

Data Science Tools and Techniques

Core Programming Courses

Computing Fundamentals and Programming

Object Oriented Programming

Data Structures and Algorithms

Mathematics Courses

Linear Algebra

Differential Equations

Probability and Statistics

Numerical Analysis

Vector and Complex Analysis

Engineering Courses

Control Systems

Signals and Systems

Industrial Automation

TECHNICAL SKILLS

Programming languages

Python

C/C++

Tools/libraries

Yolo11

AWS

Pytorch

OpenCV

Scipy

NumPy

Matplotlib

Pandas

TOOLS

Software Tools

Visual Studio

Google Colab

MongoDB

Cloud Platforms

AWS

Microsoft Azure

Hardware platforms

Digital Logic Trainer

Arduino

Raspberry Pi