



# **Saher Pervaiz**

**ID:** 3420140571036 **Work permit:** Pakistani **Nationality:** Pakistani

**Date of birth:** 17/10/1986 **Place of birth:** Gujrat, Pakistan **Gender:** Female

**Carifornia Service Company S** 

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n)

#### **ABOUT MYSELF**

Computer scientist and AI researcher with a strong academic foundation in Computer Science, currently specializing in Machine Learning and Natural Language Processing (NLP). Skilled in Python, TensorFlow, and PyTorch with handson experience in building and optimizing transformer-based models for real-world applications such as phishing email detection, CV-job matching, and fake news classification. Research interests include AI-driven cybersecurity, Retrieval-Augmented Generation (RAG) systems, and epidemiological modeling using the SIR framework. Certified in Supervised Machine Learning (Coursera, 100% score) with peer-reviewed publications. Dedicated to advancing intelligent systems through data-driven research and innovative algorithm development.

#### **WORK EXPERIENCE**

■ Student at University of Chenab - Gujrat, Pakistan

City: Gujrat | Country: Pakistan

## **NLP Engineer**

[ 18/02/2024 - Current ]

- 1. Conducted advanced research in Natural Language Processing (NLP), focusing on real-world applications like fake news detection, phishing email classification, and multilingual information retrieval.
- 2. Designed and trained transformer-based models (e.g., BERT, GTE-small) for text classification and semantic similarity tasks.
- 3. Developed a RAG (Retrieval-Augmented Generation) system combining LLMs with vector databases (e.g., FAISS/ Chroma) for CV-job matching applications.

Preprocessed and cleaned large text datasets using tokenization, lemmatization, and stop-word removal to optimize model accuracy.

Evaluated models using precision, recall, F1-score, and confusion matrix analysis; improved performance through hyperparameter tuning.

- 4. Collaborated on academic writing and contributed to peer-reviewed research papers, focusing on hybrid neural-fuzzy approaches for fake news classification.
- 5. Developed an Al-powered chatbot to assist youth in discovering scholarships, internships, and global opportunities based on their profile and interests. Utilized NLP techniques to match user queries with curated databases for real-time, relevant results.
- 6. Converted raw machine learning code into a user-friendly web application that allows users to upload datasets and instantly perform automated data cleaning. Integrated key preprocessing steps including missing value handling, encoding, and normalization for streamlined analysis.
- 7. Developed an Al-powered Health Advisor Chatbot using LLaMA-3 and Groq API to assess anxiety, self-esteem, and stress levels through natural conversation. Delivered personalized mental health guidance using prompt engineering and real-time NLP analysis.



# □ Crazysolutions - Gujrat, Pakistan

City: Gujrat | Country: Pakistan

## Web developer

[01/08/2023 - 31/08/2024]

Developed and maintained dynamic web applications using PHP, MySQL, HTML, CSS, and JavaScript to meet client-specific requirements.

Built secure, scalable, and responsive backend systems for content management, user authentication, and payment processing.

Integrated third-party APIs and services (e.g., payment gateways, email services) to enhance application functionality. Followed MVC architecture and used frameworks like Laravel or Codelgniter for faster, modular development. Implemented CRUD operations, form validation, file uploads, and session management for various web portals. Collaborated with front-end developers and designers to ensure seamless user experiences and cross-platform compatibility.

Proficient in debugging, version control (Git), and database optimization for performance improvements.

#### **PUBLICATIONS**

[2025]

# DETECTING PHISHING ATTACKS IN CYBERSECURITY USING MACHINE LEARNING WITH DATA PREPROCESSING AND FEATURE ENGINEERING

This research focuses on detecting phishing emails using machine learning techniques. By applying tokenization, feature engineering, and vectorization, the study achieved high accuracy in identifying phishing attempts. The findings contribute to enhancing email security through AI-driven detection methods.

[2025]

# Numerical Performances of the SIR Dynamical Prototype with the Hospital Bed Impacts Using Artificial Neural Network

Assisted the co-author in research, data analysis, and manuscript preparation. The study utilizes Artificial Neural Networks (ANN) to analyze the numerical performance of the SIR dynamical model, considering hospital bed availability. Contributed to refining methodology, optimizing model performance, and enhancing result interpretation.

#### **EDUCATION AND TRAINING**

## **Master of Science in Computer Science (2nd Semester)**

University of Chenab [ 01/02/2024 - Current ]

City: Gujrat | Country: Pakistan | Website: <a href="https://www.uchenab.edu.pk">www.uchenab.edu.pk</a> | Field(s) of study: Machine Learning \ NLP \ Software Architecture | Final grade: 4/4 CGPA in First Semester

#### **Masters in Computer Science**

National College of Business Administration & Economics [ 10/10/2016 - 31/08/2019 ]

City: Lahore | Country: Pakistan | Website: www.ncbae.edu.pk | Final grade: 3.83/4

# **Masters of Science in Chemistry**

**University of Gujrat** [ 01/10/2007 – 29/10/2009 ]

City: Gujrat | Country: Pakistan | Website: www.uog.edu.pk



# **Bachelors of Science in Chemistry**

**University of Gujrat** [ 01/08/2005 – 27/08/2007 ]

City: Gujrat | Country: Pakistan | Website: www.uog.edu.pk

**Intermediate** 

**Gujrat** [ 20/08/2005 ]

City: Gujrat | Country: Pakistan | Website: www.bisegrw.edu.pk

**Matriculations** 

**Board of intermediate & secondary education Gujranwala** [ 15/06/2002 ]

City: Gujrat | Country: Pakistan | Website: www.bisegrw.edu.pk

**LANGUAGE SKILLS** 

Mother tongue(s): Urdu | Punjabi

Other language(s):

**English** 

LISTENING B2 READING B2 WRITING B2

**SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2** 

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

#### **SKILLS**

php developer / Machine learning / NLP Researcher / Python (PyROOT, RDataFrame; ML: Keras, TensorFlow) / Deep Learning (Tensorflow, Pytorch(basic), Jax/Flax(basic))



#### **CERTIFICATION**

#### **Machine Learning**

Completed by Saher Pervaiz

March 7, 2025

33 hours (approximately)

Grade Achieved: 100%

Saher Pervaiz 's account is verified. Coursera certifies their successful completion of Supervised Machine Learning: Regression and Classification

## How to write a research paper

Completed by Saher Pervaiz

February 28, 2025

3 hours (approximately)

**Grade Achieved: 100%** 

Saher Pervaiz 's account is verified. Coursera certifies their successful completion of How to write a research paper

## Al for Everyone

Completed by Saher Pervaiz

March 5, 2025

6 hours (approximately)

Grade Achieved: 95%

Saher Pervaiz 's account is verified. Coursera certifies their successful completion of AI For Everyone

# **Advanced Learning Algorithms**

Completed by Saher Pervaiz

May 10, 2025

34 hours (approximately)

Grade Achieved: 95.80%

Saher Pervaiz 's account is verified. Coursera certifies their successful completion of Advanced Learning Algorithms

## Fundamentals of AI Agents Using RAG and LangChain

Completed by Saher Pervaiz

May 10, 2025

6 hours (approximately)

Grade Achieved: 75.71%

Saher Pervaiz 's account is verified. Coursera certifies their successful completion of Fundamentals of AI Agents Using RAG and LangChain