






Samaha Sohail

ML AND AI ENTHUSIAST

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Dynamic and results-driven computer science graduate with a strong foundation in Machine Learning, AI, and data management. I have hands-on experience developing innovative solutions, including AI-driven voice bots and computer vision applications, using frameworks like TensorFlow and PyTorch. Skilled in collaborating with multidisciplinary teams, I demonstrate proven leadership in managing data workflows and enhancing operational efficiency. Recognized for my problem-solving abilities and commitment to community service, I am eager to contribute to impactful projects in technology and innovation.

Education

 **PUCIT, University of The Punjab, Lahore, Pakistan**
Bachelor of Science in Computer Science
Linear Algebra (A), Artificial Intelligence (A), Machine Learning (A-)

2020 – 2024

Skills

Machine Learning: Deep Learning, Image Processing, Generative AI, Neural Networks, Decision Trees, Support Vector Machines

Languages: Python, C/CPP, Javascript, C#, Typescript, Kotlin

Major Subjects: OOP, DSA, Programming Fundamentals, Database, Operating System, ML, AI, Statistics

Frameworks/Libraries: TensorFlow, Pytorch, Scikit-learn, Pandas, Keras, Numpy.

Technologies/Tools: SQL, Oracle, Excel, Jupyter Notebooks, Matlab, Github, Roboflow, Anaconda, Visual Studio Code, .Net Asp Core, Angular

Soft Skills: Adaptability, Problem Solving, Communication, Analytical Thinking, Leadership, Collaboration

Experience

Associate ML Engineer | BITLogix | Lahore, Pakistan

July, 2024 – Present

- Architecting an advanced AI-driven voice bot that autonomously calls users for pending invoice notifications, utilizing Pipecat, OpenAI's LLM, Eleven Labs TTS, DailyAI, and Resemble AI for natural, human-like conversations.
- Integrating voice cloning technologies to enhance personalization, enabling unique, adaptable voice interactions that mimic human speech and elevate user experience.
- Demonstrating expertise in AI, NLP, and voice synthesis to streamline business processes, creating seamless, automated voice interactions that optimize engagement.
- Spearheading a computer vision project for bone fracture detection using advanced deep learning models, including YOLOv8, YOLOv9, Faster R-CNN, Mask R-CNN, Detr Resnet-50 to achieve real-time diagnostics, significantly improving automation and diagnostic accuracy in healthcare.

ML Team Lead | Parkinson's Tremor Detection Project | Univeristy of Lubeck, Germany

2023 – 2024

- Collaborated with German researchers Artur Piet and Gabriela Ciortuz on Parkinson's tremor detection, achieving over 90% precision by leveraging advanced data processing and algorithm design.
- Managed end-to-end data workflows, including sensor-based data acquisition, extensive data cleaning, preprocessing, and anomaly detection, ensuring high-quality datasets for accurate model training.
- Performed in-depth data visualization and exploratory data analysis (EDA) to identify trends, patterns, and outliers, facilitating informed model development and optimization.
- Utilized advanced deep learning methodologies—Deep Neural Networks, Convolutional Neural Networks, Recurrent Neural Networks, Transformers, and K-means Clustering—achieving detection accuracies between 85% and 95%.
- Demonstrated strong skills in data manipulation, feature engineering, and dataset preparation, aligning data engineering and machine learning for innovative healthcare solutions.

Vice President | Kaar e Kamal | Lahore, Pakistan

2022 - 2024

- Managed NGO initiatives, led a team of 200+, and maintained records for ration, medicine, and financial aid distribution to beneficiary families. Coordinated strategies to fulfill organizational goals effectively.

Teaching Assistant | PUCIT, Punjab University | Lahore, Pakistan

2021 - Dec, 2022

- Taught Programming Fundamentals in C/C++ to a class of 50+ students, resulting in a 20% increase in average exam scores.

Ambassador Leader | TheBookDotCom | Lahore, Pakistan

2021 - March, 2022

- Directed nationwide recruitment activities as the Ambassador Leader of The Book Dot Com.
- Successfully increased team size by 30%, expanding the reach and impact of the organization.
- Achieved a 25% improvement in organizational productivity through enhanced team collaboration and engagement.
- Developed and implemented effective training programs for new recruits, ensuring alignment with organizational goals.

Projects

Activity Monitoring System | Python, NumPy, scikit-learn, Matplotlib

- Directed the creation of an innovative sensor-based activity recognition pipeline, implementing advanced machine learning algorithms, including Support Vector Machine (SVM) and Random Forest models.
- Improved recognition accuracy by 40%, significantly enhancing the system's reliability in differentiating between various physical activities such as walking, running, and sitting.
- Decreased false positives by 25%, ensuring that the system correctly identified user activities without unnecessary alerts, thereby increasing user trust and engagement.
- Utilized Python libraries like NumPy for efficient data handling, scikit-learn for model implementation, and Matplotlib for data visualization, creating insightful graphs to analyze model performance.

Hospital Management System | Oracle database management, data integrity, data migration, data analysis

- Developed a comprehensive Hospital Management System as part of my university coursework, utilizing Oracle for database management to streamline data operations across various hospital departments.
- Designed and implemented relational database schemas, ensuring data integrity and optimizing query performance for efficient information retrieval.
- Conducted data migration and integration from legacy systems, facilitating a seamless transition and minimizing disruption to hospital operations.
- Implemented robust data security measures and compliance protocols to protect sensitive patient information, enhancing data governance in the healthcare environment.
- Collaborated with peers to gather requirements, perform data analysis, and create reports that support decision-making and operational efficiency.

Student Interest System | Javascript, C# , Html/Css, MVC, SQL, Data Visualization

- A groundbreaking web project meticulously crafted to redefine the management of student information and interests.
- Comprehensive dashboard with widgets and visualizations to showcase key statistics and insights.

Awards and Certificates

Bronze Medal in Asia Topi ICPC Online Preliminary Round

Dec,2023

- Achieved third place in a one of the most prestigious and long-standing competitive programming contests in the world, showcasing my problem-solving skills and proficiency in algorithm design.

Gold Medal in Baiz Bazi, Punjab University by Event Management Society

June,2023

- Awarded first place for demonstrating exceptional strategic thinking and teamwork in a high-pressure event management competition.

Secured 5th Position in SOFTEC, A Programming Contest at FAST University

May, 2023

- Ranked fifth among numerous participants, reflecting my strong coding abilities and competitive edge in programming challenges.

Second Runner Up in Code Fest 3.0

April,2023

- Recognized as one of the top three teams in a coding competition, demonstrating my aptitude in software development and collaborative problem-solving.

Second Runner Up in Code Fest '22

2022

- Secured third place in Code Fest 2022, highlighting my consistency and skill in tackling coding challenges.

Awarded "Most Hardworking Female of Kaar e Kamal"

Oct, 2022

- Honored for exceptional commitment and contributions to NGO initiatives, showcasing my leadership and dedication to community service.

Female Team Lead, The Book Dot Com (TBC)

March, 2021

- Led a nationwide recruitment initiative, significantly increasing team size and productivity, while enhancing my leadership and organizational skills.

Leadership and Extracurricular

Director Inductions | Kaar-e-Kamal PU Chapter

Jan,2023 – Mar,2023

- Led the induction process for new directors, ensuring a smooth transition and alignment with the organization's goals and values. When I joined, the team comprised 50 members, but after the induction, it expanded to 500.

Female Team Lead | Kaar e Kamal PU Chapter

Feb, 2022 – Dec,2022

- Honored for exceptional commitment and contributions to NGO initiatives, showcasing my leadership and dedication to community service.

Graphic Designer | TheBookDotCom

2021 – Mar,2022

- Created visually compelling designs that enhanced brand identity and effectively communicated our message to the audience.