

Talha Zain

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SUMMARY

As an AI/ML professional with over 1.5 years of experience, I am driven by a passion for leveraging deep learning and neural networks to enhance organizational decision-making and innovation. With expertise in developing and fine-tuning large language models (LLMs) like GPT-3 and Llama, I tackle complex natural language processing (NLP) challenges and create generative AI solutions. My strong knowledge of model training, transfer learning, and data preprocessing allows me to optimize and scale AI systems effectively. I am deeply interested in cutting-edge research in generative AI and neural networks, aiming to continuously innovate and apply state-of-the-art techniques to solve real-world problems and deliver impactful solutions.

EXPERIENCE

IT Genics — Lahore

Oct 2024 – Present

AI/ML Engineer

- **Developing AI Models:** Design, train, and deploy machine learning models to solve real-world challenges, including predictive analytics, natural language processing, and computer vision.
- **Chatbot Development:** Build and implement intelligent chatbots for customer support, automation, and enhanced user experiences.
- **AI-Powered Website Transformation:** Collaborate with teams to convert traditional websites into AI-powered platforms, integrating advanced personalization and interactive capabilities.
- **Data Preprocessing and Analysis:** Gather, clean, and analyze large datasets to extract actionable insights, ensuring high data quality for AI applications.

IT Solutions World Wide – Islamabad

Jan 2024 – Sept 2024

Data Engineer

- Developed predictive churn models using machine learning algorithms such as logistic regression, XGBoost, and gradient boosting, optimizing customer retention strategies through advanced analytics.
- Collaborated with cross-functional teams to design and implement end-to-end AI pipelines, utilizing techniques like feature engineering, model selection, and hyperparameter tuning to deliver actionable insights.
- Proficiently managed Teradata, GaussDB and Hadoop systems, overseeing ETL processes, daily operations, and troubleshooting tasks, ensuring seamless data flow, system stability, and high-performance data processing.

FunSol Technologies – Islamabad

Jul 2023 – Dec 2023

AI/ML Engineer

- Developed and deployed advanced LLMs, including GPT-3, Llama, BERT, and Falcon, using transfer learning and fine-tuning to address complex NLP challenges, enhancing the company's AI capabilities and enabling the development of customized chatbots for various use cases.
- Collaborated with cross-functional teams to gather requirements and design end-to-end AI pipelines, implementing algorithms by leveraging neural networks, deep learning frameworks (TensorFlow, PyTorch), and reinforcement learning to drive efficiency and innovation.
- Conducted in-depth data analysis to identify key factors contributing to customer churn, informing strategic initiatives. Applied ensemble learning techniques and GPU-accelerated training to improve the accuracy of marketing decision predictions, driving impactful AI-driven solutions.

EDUCATION

NUCES, FAST – Islamabad

Aug 2019 – May 2023

Bachelor of Computer Science

PROJECTS

AITRAX – Pulmonary Fibrosis Progression Using Deep Learning

- Using TensorFlow and Keras, the model predicts and tracks disease progression with 72.56% accuracy by leveraging medical imaging data like CT scans for training deep learning models. The project's results have contributed to developing more effective treatment strategies for pulmonary fibrosis and enhancing patient outcomes.

Cardiovascular Risk Prognostication and Classification System

- The model achieved a 96.82% accuracy rate in predicting heart disease likelihood, as assessed through cross-validation and comparison with actual medical outcomes. This success underscores the potential of machine learning in healthcare, suggesting that similar models could be developed for other diseases to enhance global health outcomes.

CERTIFICATIONS

IBM: Tools for Data Science

Microsoft: Microsoft Azure Fundamentals (AZ-900)

IBM: Data Science Methodology

IBM: Machine Learning with Python

IBM: Databases and SQL for Data Science (Python)

IBM: Data Analysis With Python

ADDITIONAL SKILLS

Skills: Python, Deep Learning, Neural Networks, Machine Learning, TensorFlow, Keras, PyTorch, Scikit-learn, Data Visualization, Data Analysis, SQL, NLP, Finetuning, CUDA, Text Generation, Transformer Models, Language Modeling, Azure, Database Management, Data Modeling.