Muhammad Ghulam Jillani

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Profile

Senior Data Scientist Machine Learning Engineer with strong expertise in Generative AI LLM, specializing in the development and deployment of advanced AI solutions. Expert in enhancing data processing capabilities and driving innovation in SaaS and PaaS environments. Skilled in creating user-friendly AI applications and optimizing data workflows. Proven track record of leveraging AI to solve complex business problems and improve operational efficiency.

Technical Skills

- **Programming & Development:** Python, Scikit-Learn, TensorFlow, Keras, PyTorch, NLTK, Transformers, EDA, ETL, PySpark, Matplotlib, Plotly, Open-CV, SQL, Vector DB , Flask, Streamlit, Docker, GitHub Action, CI/CD, NoSQL, Git.
- **Data Science & AI:** Machine Learning, Deep Learning, Data Analysis, Predictive Modeling, Artificial Intelligence, Statistical Modeling, Data Visualization, Data Engineering, Model Deployment, Time Series Analysis, Cloud Machine Learning, Big Data, Technologies, NLP, Prompt Engineering, Generative AI, LangChain, RAG, LLama-index, LLM Models.
- **Management & Operations:** Business Analysis, Cloud Platforms (Heroku, GCP, Azure, AWS), MlOps, AIOps, ML flow, Auto ML, PyCaret, Process Automation, Stakeholder Management, Decision-Making, Power Bi, Agile Methodologies, Microservices, Team Building, Project Management, Product Management.
- **Communication & Collaboration:** Effective Communication, Collaboration, Stakeholder Management, Team Building.
- **Languages:** English – All professional proficiency.

Experience

Sr. Data Scientist & Machine Learning Engineer	BlocBelt	Maryland, USA	12/2022 – Currently

- **Strategic AI Leadership & Team Management:** Spearheaded the development of AI-based SaaS and PaaS solutions, leading a team of three, with a focus on Big Data, Data Analysis, and AI Engineering. This initiative directly contributed to business growth, enhancing operational efficiency, and leading to cost savings of up to $2M for clients.
- **Sales Forecasting & Market Analysis:** Conducted extensive data analysis across 500+ market entities, resulting in an 80-90% improvement in sales forecasting accuracy. This led to the implementation of actionable growth strategies, significantly improving sales and operational workflows.
- **E-Commerce Platform Innovation & Sales Growth:** Directed the launch of a personalized fashion e-commerce platform with a sophisticated recommendation engine, achieving an 80% sales uplift and a 200% surge in online orders, significantly exceeding project goals 3 months ahead of schedule.
- **Operational Excellence & Cost Reduction:** Optimized operational workflows through OpenCV compliance solutions and streamlined data processing, achieving substantial cost savings, and improving efficiency across the board.
- **Data-Driven Strategy & Revenue Growth:** Championed statistical modeling, predictive analytics, and cloud technologies, leading to an 18% growth in company revenue. Developed strategic dashboards and analytics solutions, improving data visibility by 45% and fostering cross-functional collaboration.
- **AI Integration & Enhanced Digital Sales Experience:** Enhanced SaaS and PaaS offerings with AI capabilities, focusing on distributed systems and conducting over 25 A/B tests to refine the e-commerce experience. This strategic integration was key in driving forward-thinking strategies and technological advancements.

AI Kaggle Master Mentor	Google-Kaggle	San Francisco, USA	12/2022 – 11/2023

- Engaged in a part-time capacity, dedicating 18-22 hours weekly, representing **Jillani SoftTech** as a Data Scientist and Machine Learning Engineer. Offered expertise in Tech Life, Coding, and provided career guidance through the **Kaggle-X BIPOC Mentorship Program**.
- Achieved a notable distinction as the first Pakistani in the Kaggle-X BIPOC Mentorship Program, ranking within the **top 100 Kaggle ranks globally.**
- Spearheaded a team of four, cultivating their technical prowess, bolstering confidence, and amplifying their professional and community contributions.
- Championed the growth of the data science community, instigating positive technological and data-driven transformations.

Data Scientist	Crypto Express	Thailand	01/2022 - 12/2022

- Led the development of a cutting-edge Anti-spoofing Face-App, enhancing digital identity security and reducing identity fraud incidents by 70%, ensuring safer online environments.
- Utilized AI and ML techniques to solve critical issues in multiple industries, improving process efficiency by 25% and contributing to a 15% reduction in operational costs.
- Analyzed complex datasets, engineered predictive models, and delivered actionable insights, driving a 20% increase in revenue through data-driven decision-making.
- Advanced expertise in Exploratory DA (EDA), Machine Learning, and Deep Learning, streamlining data processes that saved over 500+ hours of manual analysis annually.
- Successfully deployed AI/ML projects in a remote work setting, adapting to dynamic conditions and gaining valuable experience in the AI/ML field.

Artificial Intelligence Engineer	Pakistan Freelancing Training Center	Lahore, Pakistan	01/2021 - 12/2021

- Led training sessions for students in AI and Data Science techniques, equipping them to address real-world challenges.
- Designed and deployed models using TensorFlow and Keras, enhancing system efficiency and accuracy.
- Played a pivotal role in bridging the gap between academic learning and industry-relevant skills.
- Automated repetitive data tasks using Python, significantly reducing manual labor and error rates.
- Engaged in ongoing AI research to apply cutting-edge technologies and methodologies in projects.

Projects

- **Health Assistance Application (LLM):** Built a comprehensive health assistance application using the Gemini Pro LLM model, RAG, and LangChain. This application aids both doctors and patients by providing detailed medical information, diagnosing symptoms, suggesting treatments, and offering preventive healthcare advice. The integration of generative AI ensures accurate and personalized health recommendations, enhancing patient care and medical consultations.
- **AI-Powered Blog Generator with Bedrock and Streamlit (LLM):** Developed the AI-Powered Blog Generator with Bedrock and Streamlit using Llama 3 8B and AWS Bedrock services. Utilized Retrieval Augmented Generation (RAG) for dynamic fine-tuning on updated datasets, creating realistic AI-generated blog content. Integrated with CMS for automating content creation, editing, and publishing, enhancing content marketing and engagement.
- **Legal Document Analysis Chatbot (LLM):** Created a Python Flask-based web application using the Gemini Pro LLM model for AI-driven discussions on legal PDF documents. This chatbot significantly enhances document management and analysis efficiency by providing a custom AI chat interface. Users can query legal documents, receive contextual answers, and streamline legal research and document review processes. The solution is deployed on AWS, leveraging its robust cloud infrastructure to ensure scalability and reliability.
- **Low-Code No-Code Predictive Analytics Platform (LLM):** Developed a user-friendly predictive analytics platform utilizing GPT-4 Turbo LLM Model and PyCaret. This platform empowers non- technical users to perform classification and regression tasks on CSV datasets with ease. Hosted on Heroku, it supports data cleaning, exploratory data analysis, automated machine learning, and hyper parameter optimization. The solution democratizes advanced analytics, enabling business users to derive insights without extensive technical knowledge, thereby accelerating data-driven decision-making across the organization.
- **DocuWiz AI (LLM):** Developed an AI-powered document intelligence application to analyze various document types, including PDFs, DOCX, TXT, PPTX, CSV, and XLSX. Implemented features such as text extraction, summarization, sentiment analysis, and topic modeling using advanced NLP models like BART and DistilBERT. Integrated Retrieval-Augmented Generation (RAG) and large language models (LLMs) for enhanced document analysis. Added data analysis for CSV and Excel files, providing statistical insights and visualizations. Utilized Streamlit for an interactive UI and deployed the application on GitHub.
- **Harvestify-AI-Powered-Plant-Health-Assistant:** Developed **"Harvestify,"** an AI-powered application that diagnoses plant leaf diseases through image uploads, recommends crops based on soil and weather data, and suggests fertilizers. Leveraged machine learning models, and hosted the application on Microsoft Azure for real-time analysis and accessibility.
- **Customer Satisfaction Prediction System (MLOps):** Developed a Customer Satisfaction Prediction System using ZenML and MLflow within an MLOps framework. Achieved 93% accuracy in forecasting customer satisfaction by implementing robust predictive models. Enhanced pipeline management and deployment efficiency, leading to improved customer insights and decision-making processes.

Education

Bachelor in Computer Science (**Major:** Artificial Intelligence and Computer Science.**)**	Institute of Management Sciences

CERTIFICATIONS

- **IBM Machine Learning Specialization Professional Certificate,** IBM.
- **Deep Learning Specialization,** Deeplearning.ai.
- **Machine Learning Specialization,** DeepLearning.AI.
- **Google Advanced Data Analytics Professional Certificate,** Google.
- **Google Business Intelligence Professional Certificate,** Google.
- **Advanced Machine Learning on Google Cloud Specialization,** Google Cloud.
- **MLOps | Machine Learning Operations Specialization,** Duke University.
- **AI Product Management,** Duke University.
- **Generative Adversarial Networks (GANs) Specialization,** Deeplearning.ai.
- **Machine Learning Engineering for Production (MLOps),** Deeplearning.ai.
- **Microsoft Azure AI Fundamentals AI-900 Exam Prep Specialization,** Microsoft.
- **Preparing for Google Cloud Certification: Machine Learning Engineer,** Google.
- **Google Project Management: Professional Certificate,** Google.
- **Prompt Engineering for ChatGPT,** Vanderbilt University.
- **AWS Cloud Solutions Architect Professional Certificate,** Amazon Web Services.
- **Practical Data Science on the AWS Cloud Specialization,** DeepLearning.ai.