

# Hassan Shahzad

AI Engineer

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## PROFESSIONAL SUMMARY

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IBM and DataCamp certified Data Scientist and AI Expert with a proven track record of delivering results in product and service-based industries. Skilled in machine learning, generative AI, developing ETLs, data analytics and driving data-informed decision making. Over 4 years of industry experience and freelance AI work.

## EXPERIENCE

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### Lead AI Engineer

Jul 2024 – Mar 2025

*Venture Data*

*Lahore, PK*

- Developed an AI Voice Agent using Twilio, Eleven Labs and OpenAI that initiates calls to customers, gathers feedback, books appointments, transcribe calls and deliver analytical insights on the Tableau dashboard, reducing monthly customer support costs by \$10000.
- Implemented a RAG based Chatbot using FAISS, LangChain, OpenAI and FastAPI that modifies clothing meshes such as tops, bottoms and shoes using natural language input with Blender Python APIs.

### Senior Data Scientist

Apr 2022 – June 2024

*Bazaar Technologies*

*Islamabad, PK*

- Led the Data Science team in developing a Demand Forecasting Model using Prophet library to forecast demand for 6000+ items, resulting in a 45% reduction in GMV loss.
- Engineered and deployed a Customer Recommendation Model to suggest items to customers based on their recent purchases and geo-location, increasing weekly sales by Rs.8Mn and enhancing Average Order Value by 15%.
- Implemented Fraud Detection model with AWS to identify fake orders, reducing costs by Rs.500K monthly.
- Built a Sentiment Analysis using Multilingual BERT to understand and classify the reviews by the users written in English and Urdu and built the dashboard in Looker to visualize insights.
- Built and deployed an entire ETL pipeline using Airflow and Python on GCP, transitioning from a Talend, which significantly minimized fail-over issues and downtime, ensuring data accuracy and availability by 99%.
- Learnt Tableau to create interactive dashboards with business KPIs to be used nationally across the business. These dashboards aid in strategic decision-making and business performance monitoring.

### Data Analyst

Sept 2021 – Mar 2022

*Bykea*

*Islamabad, PK*

- Built a Fulfilment Model, which helped the business to improve the fulfilment rates in winters from 57% to 73%.
- Implemented a Fraud Detection Model, worked on devising features that substantially mitigated fraudulent activities, leading to Rs.100K savings per month.
- Conducted monthly workshops and training sessions for junior analysts on best practices in data analysis using Excel, SQL, and Looker Studio, fostering a culture of continuous learning.

### Junior Data Scientist

Mar 2021 – July 2021

*Data Pilot*

*Lahore, PK*

- Built and deployed a Random Forest model using ads data to improve sales and reduce burn for a fashion brand.

### Data Analytics and Business Intelligence Intern

Jun 2020 – Aug 2020

*Telenor*

*Islamabad, PK*

- Developed an ETL pipeline to load the data from various data sources. The data was used to build a dashboard on Looker Studio. I was awarded as a Telenor Super Intern for this project.

PROJECTS

<b>Executive AI Assistant using LangGraph</b>   <i>Python, Claude, GCP, n8n, PostgreSQL, FastAPI</i>	Apr 2025
<ul style="list-style-type: none"><li>Developed AI Executive Assistant managing emails, calendars, and WhatsApp for C-level executives using LangGraph and Google Calendar API.</li></ul>	
<b>Sales Calls Analysis using GenAI</b>   <i>Python, OpenAI, AWS, BigQuery, Looker Studio, FastAPI</i>	Mar 2025
<ul style="list-style-type: none"><li>Built end-to-end AI analytics platform extracting insights from sales calls including sentiment and summaries, with AWS/BigQuery pipeline and Looker Studio dashboards.</li></ul>	
<b>LinkedIn Sales Bot</b>   <i>Python, Open AI, Flask</i>	Jan 2025
<ul style="list-style-type: none"><li>Built LinkedIn sales bot collecting lead data from Apollo.io, automating connection requests and personalized messaging, reducing operational costs by \$15K monthly.</li></ul>	
<b>SEO Optimization using Agentic Workflow</b>   <i>Python, Crew AI, LangGraph, PostgreSQL, pgvector</i>	Sep 2024
<ul style="list-style-type: none"><li>Developed autonomous SEO platform using agentic workflows to generate optimized titles, descriptions, and keywords, eliminating manual content creation.</li></ul>	
<b>No-Code SQL Generator with LLMs</b>   <i>Python, Azure Open AI, Pinecone, PostgreSQL</i>	Feb 2024
<ul style="list-style-type: none"><li>Implemented No-code SQL Generator converting natural language to SQL queries, enabling business users to access data without SQL knowledge.</li></ul>	

TECHNICAL SKILLS

**Languages:** Python, SQL/NoSQL, Java, HTML/CSS  
**Libraries:** Pandas, NumPy, Matplotlib, Seaborn, SK-learn, TensorFlow, PyTorch, LangChain, Plotly, Spark, FastAPI  
**Tools:** GitHub, AWS, GCP, AirFlow, TaskWeaver, LangGraph, BigQuery, Docker, AssemblyAI, OpenAI, Pinecone  
**Skills:** Regression, Classification, Time Series Forecasting, Clustering, NLP, Generative AI, Gradient Boosting, Data Analytics, Data Preprocessing, ETL, Data Visualization, Restful APIs, Statistics, Operations Research, Problem Solving

EDUCATION

<b>Friedrich Alexander University Erlangen-Nurnberg</b>	Erlangen
<i>Masters of Sciences in Data Science</i>	<i>April 2025 – Present</i>
<b>Relevant Coursework:</b>	
Artificial Intelligence	Knowledge Discovery in Databases
Deep Learning	Speech and Language Understanding
<b>National University of Sciences and Technology</b>	H-12, Islamabad
<i>Bachelor of Sciences in Computer Science, Minor in Business Management</i>	<i>Sept. 2017 – June 2021</i>
<b>Relevant Coursework:</b>	
Data Structures and Algorithms	Object Oriented Programming
Digital Image Processing	Machine Learning

ACHIEVEMENTS & CERTIFICATIONS

Databricks ML Practioner Course - Certified	DataCamp Data Science Course - Certified
IBM Data Science Foundation - Certified	Telenor Super Intern - Awarded

LANGUAGES

English - C1 IELTS - Certified	German - A2 (Learning)
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INTERESTS

Football	Cricket
Hiking & Traveling	Gym