Hammad Ezad

Data Scientist with a focus on
Machine Learning Engineer and GENAI

Karachi, Pakistan | Born 22/11/1991 | +92 336 706 2494
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I can provide my own visa/work permit for Germany
within 5-8 weeks. My notice period is 30 days.

TECHNICAL SKILLS

Data Scientist (5 years of project experience) | Python (5) | R (5) | SQL (5) | Feature Engineering (3) | XGBoost (5) | scikit-learn (5) | Balanced Random Forest (4) | SMOTE (3) | Logistic Regression (5) | Time Series Analysis (5) | LLMs (3) | LLaMA 3 (3) | PHI-3 (3) | GenAI (3) | NLP (3) | Deep Learning (3) | Prompt Engineering (2) | ML Ops (3) | LangGraph (2) | LangChain (2) | Agentic AI (2) | FastAPI (2) | REST API (2) | Data Engineering (2) | Docker (2) | Azure Container Apps (2) | AWS S3 (2) | Azure DevOps (2) | Git (4) | YAML (1) | Bash (2) | Power BI (3) | ODK (2) | SurveyCTO (2) | Gurobi Cloud (2) | Oracle DB (2) | Salesforce Commerce Cloud (2) | SAP Hybris (1) | Salesforce API (2) | | Marketing Cloud (1) | Data Cloud (1) | Difference-in-Differences (5) | Panel Data (5) | RCT Design (5) | Causal Inference (5)

WORK EXPERIENCE

12/2023 – today

Senior Data Scientist
Royal Cyber Inc., Islamabad, Pakistan
Project: Salesforce GenAI Automation – AI platform automating sales email generation and customer sentiment analysis for enterprise CRM.

- Built a production-ready GenAI stack using LLaMA 3 and PHI-3 hosted on Azure with FastAPI and strict privacy controls.
- Implemented prompt masking/unmasking and custom trust boundary layers for GDPR-compliant usage.
- Enabled real-time email generation and sentiment classification via API, reducing sales drafting time by 90%. Deployed speech-to-text (NLP) connectors with Salesforce to generate real-time call summaries, accelerating customer-service resolution by 25%.
- Reduced LLM operational cost by up to 65% compared to Salesforce Einstein GPT through strategic model benchmarking.
- Built a CI/CD pipeline for LLM updates, monitoring, and deployment scalability across enterprise clients.

Technologies used: Python | LLaMA 3 | PHI-3 | FastAPI | Azure Container Apps | Salesforce API

Project: Vehicle Routing Optimization – US-based logistics optimization platform for Niagara Bottling, processing 10M+ orders/year.

- Rebuilt the entire routing engine from scratch using Python and Gurobi Cloud, reducing solve time from 60 minutes to under 5 minutes for 100+ orders.
- Delivered a secure Azure DevOps CI/CD pipeline with MuleSoft integration, enabling fully automated optimization.
- Enabled 15% cost savings in fixed and distance-based logistics by optimizing vehicle utilization and flex handling.
- Supported real-time planning and coordination with trucking partners through daily reruns and reporting automation.
- Recognized by Niagara Bottling leadership for replacing legacy AMPL/Oracle systems with a flexible, production-grade system.

Technologies used: Python | Gurobi Cloud | Azure DevOps | Oracle DB

05/2022 – 11/2023

Data Manager
University of Chicago - IRD Global, Karachi, Pakistan
Project: Vaccination Timeliness Prediction – machine learning tool to predict late vaccine events from 2.6M+ records.

- Built predictive models using XGBoost and Logistic Regression on 30+ features (geo, gender, history, weather, weekday).
- Used SMOTE to counter data imbalance and achieved 87% accuracy, 98% recall for key vaccines (e.g., Measles1).
- Integrated with the ZM mobile app for real-time intervention by frontline health workers. Improved vaccination timeliness significantly in 12 high-need districts. Developed a full pipeline and handed off a sustainable model for continued deployment.

Technologies used: Python | XGBoost | Logistic Regression | SMOTE

07/2021 – 05/2022

Senior Data Scientist
Federation of Pakistan Chambers of Commerce & Industry, Pakistan
Project: Gravity Model for Exports – Pakistan-based trade model analyzing export potential to 89 countries for horticulture.

- Built Poisson Pseudo Maximum Likelihood model to estimate the untapped market value of $1.07B in horticulture exports.
- Identified high-potential markets (Afghanistan, India, Iran, China) and product categories. Delivered export optimization insights used in cold chain investment planning.

Technologies used: Python | Trade Map | FAO | IMF | World Bank

10/2020 – 07/2021

Data Scientist
Love for Data, Karachi, Pakistan
Project: Loan Default Prediction – Egypt-based credit risk engine

- Engineered 20+ features (income, credit history, demographics) and trained ML models, achieving 92% ROC-AUC.
- Integrated the model into the loan decisioning API, reducing default rates by 18% and underwriting time by 60%.

Technologies used: Python | scikit-learn | SQL | REST API

EDUCATION

09/2017 – 08/2020

Master of Science in Quantitative Economics
Konstanz Universität, Konstanz, Germany

09/2013 – 12/2016

Bachelor of Science in Mathematics and Economics
IBA Karachi, Karachi, Pakistan

ACHIEVEMENTS

Speaker & Presenter (**ESDC-BER Conference 2021**) | **Published Policy Brief** as Author (FPCCI) | Co-Author, **Immunization Working Papers**

LANGUAGE SKILLS

English (C2) | Urdu/Punjabi (Mother tongue) | German (A1, currently learning)

HOBBIES

Mountain Hiking | Swimming | Running