

Syeda Zainish Fatima Abbas

AI / ML Data Analyst · Machine Learning · Computer Vision · Business Intelligence

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[LinkedIn](#) · [GitHub](#) · [Portfolio](#)

PROFESSIONAL SUMMARY

Final-year Data Science student specializing in Machine Learning, Statistical Modeling, and Business Intelligence, with 1+ year of industry experience developing data products, automated reporting solutions, and ML pipelines for enterprise-level datasets. Proficient in Python, SQL, Scikit-learn, Power BI, Tableau, and ETL systems. Experienced in exploratory data analysis, data visualization, and presenting data-driven insights to cross-functional stakeholders. Recognized nationally by Ignite National Technology Fund (MoITT) for AI innovation impact.

EDUCATION

B.S. in Data Science | [Air University](#)

Islamabad, Pakistan · Expected July 2026

CGPA: 3.31 / 4.00

- **Relevant Coursework:** Artificial Intelligence, Machine Learning, Computer Vision, Multivariate Statistics, Time Series Analysis, Big Data Analytics, Parallel & Distributed Computing, Data Warehousing, Data Visualization

EXPERIENCE

AI & Data Analytics Intern | [PepsiCo – Haidri Beverages Franchise](#) Islamabad, PK · June 2025 – Aug 2025

- **Computer Vision:** Developed an AI-powered computer vision system using YOLOv11 and instance segmentation to automate SKU detection and cooler utilization tracking, improving inventory monitoring efficiency by ~35%.
- **Enterprise BI:** Designed interactive Power BI and Qlik Sense dashboards used by cross-functional teams to analyze sales performance and cooler utilization across 6+ distribution regions, reducing manual reporting time by ~40%.
- **Full-Stack Integration:** Built a custom frontend integrated with Google Sheets API and SAP data via ETL pipelines to digitize 3+ manual production workflows, ensuring data persistence and cutting data entry time by ~50%.

Data Analyst Intern | [PepsiCo – Haidri Beverages Franchise](#) Islamabad, PK · July 2024 – Aug 2024

- **Data Modeling:** Developed and maintained interactive Power BI dashboards (DAX), providing data-driven insights for national-level sales reporting across multiple product lines.
- **Data Integrity:** Cleaned and transformed large-scale datasets using advanced Excel and Power Query, ensuring data integrity for executive-level analytical reporting.

Data Science Intern | [Air University](#)

Islamabad, PK · June 2023 – July 2023

- **ML Preprocessing:** Performed data annotation and preprocessing for ML models using Python (Pandas, NumPy), enhancing data integrity for research-level analysis.

PROJECTS & RESEARCH

SafeRaah — AI-Powered Accident Detection & Emergency Response System (Final Year Project)

- Designed a real-time computer vision pipeline using CNN-based architecture to detect road accidents from live video feeds and trigger automated emergency alerts, achieving high-accuracy classification across diverse lighting conditions.
- Optimized inference latency for edge deployment, investigating real-time CV architectures for continuous video stream processing.
- Awarded Top 7 (GovTech) at Ignite National Technology Fund and Top 13 / 300+ at AU Business Incubation Center for innovation and social impact.

Gated Mixture-of-Experts for Salary Prediction

- Built a Gated Mixture-of-Experts (MoE) ML architecture with a Random Forest gating network directing job data to specialized XGBoost regressors, optimizing predictions for standard and high-pay roles.
- Converted unstructured text (Skills, Functional Area) into predictive features using TF-IDF and SVD; applied FP-Growth for skill co-demand analysis, revealing 'Power Skill Clusters'.
- Achieved strong forecast accuracy (RMSE, MAE, R²) and built a Power BI dashboard for actionable salary-driver insights.

CPI Dynamics & Socio-Economic Clustering

- Conducted city-level time-series forecasting using ARIMA and Facebook Prophet on Pakistan CPI data to model inflation trends.
- Applied K-Means Clustering to segment cities by economic vulnerability; delivered interactive Power BI dashboard with dynamic drill-downs for stakeholders.

TECHNICAL SKILLS

Programming: Python · Pandas · NumPy · Scikit-learn · SQL · C++

AI, ML & Statistics: YOLOv11 · Computer Vision · Ensemble Methods · XGBoost · TF-IDF · SVD · ARIMA · Prophet · Feature Engineering · Statistical Modeling, Supervised/Unsupervised Learning, Regression.

Frameworks & Tools: PyTorch · TensorFlow · OpenCV · Django · React

Data Engineering: ETL Pipelines · Databricks · Google Sheets API · SAP · Selenium · BeautifulSoup · Git/GitHub · API Integration

Analytics & BI: Power BI (DAX) · Qlik Sense · Tableau · Excel (Power Query, Pivot Tables) · Multivariate Analysis

Cloud & DevOps: AWS (S3, EC2) · Google Cloud · Docker

Practices: Agile / Scrum · A/B Testing · Data-Driven Decision Making · Stakeholder Reporting

LEADERSHIP & ENGAGEMENT

Competition Head | [AIRVIZ Nationwide Data Visualization Competition](#) Pakistan · 2025

- Led organization of a nationwide data visualization competition involving 15+ universities across Pakistan; managed outreach, logistics, and judge coordination.

Event Head | [DataQuest, Air University](#) Islamabad · 2024

- Directed one of the institution's largest data analytics competitions, managing inter-university participation and technical workshop logistics.

Tech Lead | [AI & Data Society](#) Air University · 2023 – 2024

- Organized AI hackathons and technical workshops; mentored 50+ students in machine learning, deep learning, and data visualization.

CERTIFICATIONS

Google Analytics Certification – Google Skillshop Feb 2026 – Feb 2027

Credential ID: gmp-ma-mastery-lp01

Data Analyst Associate – DataCamp Aug 2025 – Aug 2027

Credential ID: DAA0013778917333

Python for Data Science and AI – Coursera

Intermediate Data Modeling in Power BI – DataCamp