Ayesha Saif

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Education

Illinois Institute of Technology, Chicago (*Masters, Data Science*)   **Jan 2024 - Dec 2025**
- **Coursework:** Statistical Learning, Database Organization, Time Series Analysis, Machine Learning,   *GPA: 4.0*
  Big Data Analytics, Data Preparation and Analysis, Cloud Computing

National University of Computer and Emerging Sciences, Karachi (*Bachelors, Computer Science)*   Aug 2019 - June 2023
- **Achievements:** Awarded the Dean's List Certificate

Skills

- **Programming Languages**: Python, R, SQL, NoSQL
- **Technologies & Tools**: Excel, Power BI, Tableau, Airflow, Pandas, Matplotlib, NumPy, Seaborn, SciPy, Scikit-Learn, Apache Spark, Snowflake, PySpark, AWS, Azure, GCP, Databricks, Docker, ETL, Terraform, Kubernetes, Linux, Git/GitHub, Jira
- **Business Analyst**: Exploratory Data Analysis, Artificial Intelligence, Statistical Analysis, Predictive Modelling, KPI Reporting, Market Analysis, Time Series Forecasting, Cloud Computing, Data Visualization, Big Data, Operational Reporting, Forecasting Models, Google Sheets, SAS

Professional Experience

Data Analyst, Labelmaster   **Chicago, IL | Jan 2025 – June 2025**
- Conducted in-depth analysis of transactional, **PPC**, and **SEO** metrics using advanced **Excel functions** and **Power BI** to identify cost drivers, resulting in a **10%** reduction in keyword spend through budget reallocation.
- Utilized **association rule analysis** to propose and refine product bundling strategies, achieving an **8%** increase in cross-sell revenue and fostering data-driven decision-making.
- Applied text analytics to optimize SEO keyword usage, boosting organic clicks by **12%** and enhancing overall digital performance.
- Supported operational forecasting and resource planning by integrating sales trends with inventory movement and promotional spend data, improving KPI tracking and cost accuracy.

Data Analyst, Sofy   **Seattle, WA | Jun 2023 – Dec 2024**
- Streamlined reporting processes by **60%** through **automation** with **Power BI** and **Excel dashboards**, expediting critical decision-making and supporting continuous improvement initiatives.
- Enhanced data accuracy by **30%** using **SQL** and **Azure Data Factory** for sales data validation, ensuring reliable metrics for operational assessments and **KPI** monitoring.
- Conducted **regression analysis** of historical data trends, optimizing resource allocation, resulting in **25%** increase in campaign **ROI**.
- Performed detailed churn analysis and customer segmentation with Excel and **Python**, reducing customer **churn** by **15%** and contributing to improved operational efficiency.

MLOps Engineer, Pumpjack Dataworks   **Karachi, Sindh | Jan 2023 - May 2023**
- Reduced deployment time by **75%** via **CI/CD pipelines** using **Docker** and **Git,** enabling **5+** scalable **AWS** deployments.
- Used **K-Nearest Neighbors** to classify incidents by location, identifying **5** critical hazard zones for targeted interventions.
- Implemented the **Random Forest** algorithm for accurate **classification** of safety incidents based on keyword data, achieving **85%** accuracy in routing incidents to the relevant departments.

Projects

Customer Satisfaction Analysis *(NLP Text Classification, Feature Engineering, Predictive Modeling, Visualization)*
- Developed an end-to-end **Python classification pipeline** for **e-commerce** reviews, supporting proactive retention.
- Improved model accuracy by **72%** and raised negative-review recall by **65%** via **feature engineering** and **hyperparameter tuning**.
- Identified late deliveries as a **key factor** behind negative feedback, **boosting** customer satisfaction.

Sales Analysis & Reporting with SQL and Tableau *(SQL Analytics, Interactive Dashboards, Business Intelligence)*
- Queried historical sales data in **SQL Server** to identify **top-performing product lines, deal sizes,** and **annual revenue trends**.
- Created interactive **Tableau dashboards** with **monthly, geographic**, and **product-level insights**, highlighting **seasonal peaks** and informing strategic decisions.

COVID-19 Data Analysis, Visualization, and Forecasting *(ML Models, Hyperparameter Tuning, Visualization)*
- Achieved **90%+** accuracy in **trend forecasting** using **Logistic Regression, Decision Trees, Random Forests,** and **XGBoost.**
- Integrated **GridSearchCV** for **hyperparameter tuning**, optimizing **predictive model performance** and **analysis**.
- Created **visualizations** to interpret **pandemic progression** to assist in critical business and public health decisions.