Mehreen Habib

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ACADEMIC QUALIFICATION

University of Oklahoma   **Norman, Oklahoma**
M.S. Computer Science **(CGPA: 4.0/4.0)**   Aug 2022-May 2024

University of Engineering and Technology   **Lahore, Pakistan**
B.S Computer Science **(CGPA: 3.25/4.00)**   Oct 2016-Aug 2020

TECHNICAL SKILLS

- **Programming Languages:** Python, Java, R, C
- **Data Visualization Tools:** Tableau, Power BI, Excel (VBA, Pivot Tables, Power Pivots, Macros)
- **Databases:** MySQL, Microsoft Azure, MongoDB, Oracle, SQLite, Amazon RDS
- **Machine Learning:** SVM, Random Forest, Decision Trees, K-Means Clustering, Linear Regression, Naïve-Bayes
- **Scripting Languages:** Shell Scripting (Unix/Linux), PowerShell
- **Cloud Platforms/Services:** Google Cloud Platform (GCP), Microsoft Azure, Amazon Web Services (AWS)
- **Other skills and Tools:** Microsoft Office, MATLAB, Git, JIRA, SPSS, Access, SAS, AWS S3, IAM, Snowflake

PROFESSIONAL EXPERIENCE

Data Institute for Societal Challenges   **Norman Oklahoma**
Graduate Research Assistant (GRA)   August 2022 – May 2024

- Led AI-driven projects for agriculture optimization and COVID-19 forecasting by conducting data collection, preprocessing, and exploratory data analysis
- Collaborated with data engineers to implement ETL processes and optimized SQL queries, delivering robust, data-driven insights and automated reports.
- Worked on multidisciplinary teams for various data projects, developing and presenting detailed reports and visualizations using Python (NumPy, pandas, scikit-learn) and Tableau/Matplotlib. Created accessible, actionable data presentations that informed strategic decisions.
- Improved analytical capabilities by engaging in feature engineering and model development. Designed ETL pipelines and performed data normalization and encoding, enhancing data quality and model accuracy for more reliable analysis.

NETSOL Technologies, Pakistan   June 2021-August 2022
Data Analyst/Quality Assurance Engineer

- Managed data repositories and client implementations, specializing in software quality assurance (SQA) methodologies.
- Performed System testing, Functional, Regression, Smoke testing, Integration, GDPR, Black Box, Cross Browser and Sanity testing.
- Proficient in ensuring software quality through defect identification and resolution, managing detailed test documentation, and addressing client automation queries using the waterfall model.
- Evaluated data visualization needs from business users and created customized visual representations for decision-making.
- Formulated SQL queries to extract crucial data from Sales data marts, ensuring accuracy and relevance.
- Streamlined testing processes, improved operational efficiency, and utilized automated SQL queries to analyze logs, resulting in a notable enhancement of the team's issue resolution efficiency by approximately 20%.

ACADEMIC PROJECTS

Smart Agricultural Decision Maker using Data Mining and Python/HTML, CSS

- Developed a crop recommendation system using Decision Trees and Random Forest algorithms from scratch to predict optimal crop choices based on environmental factors.
- Validated the models through statistical significance and 95% confidence intervals.
- Displayed the results on a user-friendly webpage using HTML, CSS, JavaScript, and Python Flask.

JSP Web Application using Java and SQL

- Developed a dynamic JSP web application integrating Azure SQL databases using Eclipse
- Created a Java application to manage employees, products, customers, accounts, complaints, and accident records, with user-friendly interfaces for data handling.
- Organized database support to ensure efficient operations and decision-making.

Smart City Data Analysis

- Downloaded and cleaned PDF documents created and explored clustering models and performed topic modeling to derive insights.
- Analyzed and cleaned the Smart City Challenge dataset to extract themes and concepts.
- Leveraged data collection, preprocessing, and visualizations for comprehensive analysis.

Road Accidents Analysis using Power BI and Excel

- Developed a Road Accident Analysis Dashboard in Excel, utilizing VBA, pivot tables, and formula-driven KPIs.
- Conducted data cleaning and created visualizations to track casualty trends, providing actionable insights for client safety strategies.
- Enhanced client safety measures through comprehensive data analysis in Excel.

Covid-19 Analysis using Tableau.

- Developed a Tableau dashboard analyzing COVID-19 data, showcasing total deaths by state, age group distribution, COVID case trends, and gender distribution.
- Included details on ICMR testing labs, statewide testing data, and vaccine doses administered.
- Provided a comprehensive view of the pandemic's impact and response efforts at state and national levels.

CERTIFICATION

- Accenture: Data Analytics and Visualization Job Simulation   June 2024