Syed Waliullah

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Summary

Software Engineering student with hands-on experience in business intelligence, data analysis, and reporting using SQL, Python, and Power BI. Experienced in data cleaning, validation, transformation, and documentation to support reliable analytics and informed decision-making. Strong collaborator with an interest in enterprise data architecture, data quality, and transparent data practices.

Work Experience

Data Analyst Intern – Solar Car (Remote)   September 2023 – May 2024

– Extracted, transformed, and analyzed engineering telemetry data using Python (Pandas, NumPy) to support performance analysis and reporting.
– Ensured data quality through validation, cleansing, and consistency checks across historical datasets.
– Built and maintained analytical reports and Power BI dashboards for engineering teams.
– Collaborated with cross-functional teams to gather data requirements and support data strategy initiatives.

Software Engineer Intern – AC-Robotics, Calgary, AB   September 2021 – April 2022

– Developed Python-based automation scripts for robotics control, data collection, and sensor diagnostics.
– Improved data logging efficiency by implementing structured database storage and SQL-based analytics.
– Collaborated across engineering teams to enhance testing reliability and reporting accuracy.

Projects

Business Operations Reporting System (SQL Server, T-SQL, Python, Excel)

– Designed an end-to-end reporting system to ingest, cleanse, and consolidate operational data from multiple sources.
– Implemented data quality checks and validation rules using Python (Pandas) to ensure accuracy and consistency.
– Built T-SQL queries and reports to support ad-hoc and scheduled business reporting.
– Automated data extraction and reporting workflows, reducing manual processing effort.

Flight Management System (C++, SQL)

– Designed a relational SQL backend and reporting queries to support operational and analytical use cases.
– Documented data structures and flows to ensure data accuracy and system consistency.
– Generated analytical reports to validate system correctness and operational insights.

Dish Craft – Recipe Application (Flask, Python, Bootstrap, OpenAI API)

– Created a full-stack web application generating personalized recipes with an LLM-based recommendation engine.
– Developed data cleaning and transformation logic to ensure structured API outputs.
– Implemented testing and feedback loops to refine accuracy and user satisfaction metrics.

Network Intrusion Detection System (Python, Scikit-learn, Pandas)

– Analyzed and processed the NSL-KDD dataset using Pandas and NumPy for ML-based classification.
– Built decision tree and random forest models achieving high detection precision.
– Visualized model performance, accuracy, and error trends through structured analytical reporting.
– Documented data flows and preprocessing steps to support reproducibility and model evaluation.

Education

University of Calgary – Bachelor of Science in Software Engineering   (Expected 2027)

Relevant Coursework: **Data Analytics:** Programming with Data, Probability & Statistics with Machine Learning, Data Science, Engineering Economics **Software & Systems:** Database Systems, Operating Systems, Networked Systems, Object-Oriented Design, Software Architecture **Mathematics & Logic:** Linear Methods, Discrete Mathematics, Algorithms, Applied Machine Learning

Skills

Programming	Python, SQL, C++, C, C#, Java, JavaScript, HTML/CSS, Flask
Data Analytics	SQL, T-SQL, Power BI (DAX, dashboards), Pandas, NumPy, Data Cleaning, Visualization, EDA
Database Tools	SQL Server, MySQL, SQLite, Data Modeling, Query Optimization
Business Tools	Microsoft Excel (Pivot Tables, VLOOKUP), PowerPoint, Power Automate
Machine Learning	Scikit-learn, Feature Engineering, Model Evaluation
Professional	Analytical Reasoning, Problem Solving, Team Collaboration, Communication