Name: Christopher Marji

Project Name: Starlink Performance Analysis

GitHub Repository: https://github.com/Chrizzm/SQL-Portfolio-Project

Job Description

SpaceX Business Analyst, Consumer Hardware (Starlink)

I selected the role of a Business Analyst at SpaceX because it aligns with my interest in space technology and my expertise in data analysis. This role offers an opportunity to impact global internet accessibility through Starlink, which matches my career goal of working on cutting-edge technologies that have a significant societal impact. The role is intriguing as it involves analyzing vast amounts of data to drive product decisions, which is a perfect use of my analytical skills.

Problem

Analysis of Starlink Satellite Performance

The project aims to analyze the performance of Starlink satellites to identify patterns and potential areas for system improvement. The relevance of this problem to the job is high, as understanding satellite performance directly influences customer satisfaction and hardware optimization, key areas of responsibility for a Business Analyst in the consumer hardware team at SpaceX. Solving this with SQL and visualization tools is feasible and aligns with the job's requirement to manage and interpret data effectively.

Data Sources

API and Web Scraping

API: I will use the N2YO API to retrieve real-time data on satellite positions and conditions. This data source will provide insights into satellite trajectories and operational status, essential for analyzing satellite coverage and performance.

Web Scraping: The SpaceX website will be scraped to gather data on launch schedules and outcomes. This information is crucial for correlating satellite performance with specific launches or mission types.

Both data sources are integral to understanding the operational aspects of Starlink satellites, supporting the business analysis tasks outlined in the job description.

Solution

Data Analysis and Visualization Approach

The solution will involve SQL queries to aggregate satellite data, identify patterns, and detect anomalies in satellite performance. I plan to use SQL to segment data by time, location, and satellite condition. Visualizations will be created to represent these analyses clearly, showing trends over time and pinpointing issues that require attention. This approach will help in making informed decisions on satellite deployment and operational adjustments.