Final Project Draft

Database Management Systems and Design

What?

"Optimizing Porter Operations: A Data-Driven Approach Using Snowflake"

- Porter is one of the logistics companies in India providing services such as moving of goods from one place to another, similar to U-Haul but here the vehicle is driven by delivery partner associated with the company and not by the person renting the vehicle.
- This project focuses on how snowflake is used in analyzing the huge amount of data and querying it in simple ways by consuming less time and increasing the operational efficiency.
- By utilizing SQL, I'll be analyzing the vehicles data, customer information, vehicle performance.

Why?

- Querying the large set of databases using SQL would be a better approach and less time consuming, picking the data from the ocean of database is a difficult task to do. By utilizing the technology this could be done in an efficient and effective manner.
- Sometimes companies such as Porter, Uber, Lyft offers incentives to the vehicles on the basis of performance, if the particular vehicle has completed the required number of trips (say 10/week), so this would be an ideal way to know which vehicle is eligible for incentive and which vehicle is getting maximum incentive.
- This could be done in many available databases, but the reason I choose Snowflake is because it is one of the commonly used data-warehouse and platform that allows users to store, process, and analyze data.
- And the benefits of snowflake include scalability, cost effectiveness, data security, high performance, data sharing and collaboration, support for structured and semi structured data, and user-friendly SQL interface.

- A huge number of people is provided with the service of moving goods, by this we could be able to track the number of orders (no of times renting vehicle) done by particular customers.
- A large number of vehicles provide this service, so it would be a better practice to track the vehicles and to calculate the incentives.
- Using snowflake, I am interested in exploring and showing, how to upload data into snowflake database and query the uploaded data to the class.

How?

Pessimistic Goals:

- Firstly, I need to learn how to use snowflake, it is one of the challenging tasks to do.
- Normalizing the databases with creation of various tables and their columns.
- Figuring the primary and foreign key and building relationship between the tables.
- Creation of dummy data inside the database.

Optimistic Goals:

- Further, I want to query the data using snowflake and draw some insights on vehicle data, customer information, vehicle performance.
- My main objective is to provide insights on vehicle incentive based on the vehicle performance.
- Using the same, I want to demonstrate the class on querying the SQL database using snowflake in the easiest and straight forward manner.