Crowd In The Town: Taxi Trip Analysis Using Python

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Project Guide
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1. Introduction

- Taxi Trip Analysis using dataset provides valuable insights and information for various taxi companies, city planners and researchers.

- Problem Identified :

  - Efficiently assigning the cabs to the passengers during peak demand periods is challenging.

  - To identify popular pickup and drop off locations in a city.

- Solution Proposed :

  - Taxi company can use data analysis to better understand patterns of demand and supply for their services.

  - Pick-up and drop-off location datasets can be used to improve customer service by enabling more accurate popular pickups and drop-offs.

2. Objectives

1. To help identify trends and patterns in various accepts of taxi trip.

2. To improve operational efficiency of taxi companies.

3. To enhance customer experience and services.

4. To help businesses and organizations understand the market demand.

5. To optimize their fleet and allocate their resources more effectively.

6. To use analysis for research purposes, such as studying the impact of transportation policies.

3. Scope

1. Can identify pick and drop-off locations with high demand.

2. Can help taxi companies understand their customer behavior.

3. Can help taxi companies to adjust their supply and demand.

4. Can help understand seasonal trends and adjust operations.

5. Can help taxi companies identify and expand their services to new locations.

4. Feature /Functionality

1. The analysis will help to visualize any patterns or trends in the data which involve plotting the data on a map of New York to see which areas have the highest demand for ride services.

2. Also it will look for different time zones of day or day of the week when demand is highest.

3. This could help ride-hailing services optimize their operations and provide more efficient services to their customers.

4. The data can also be useful for city planners and researchers to improve the quality of transportation services.
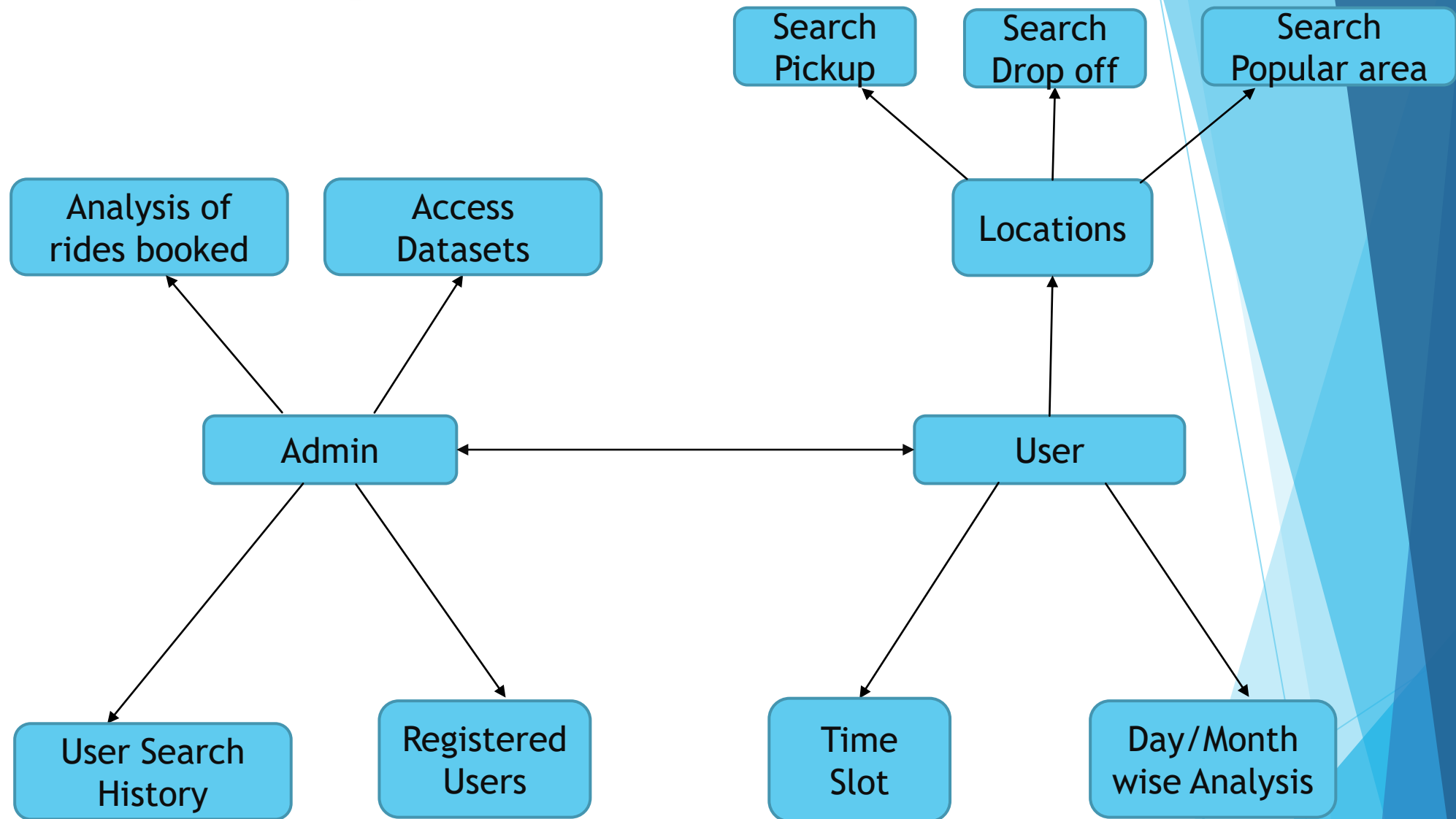
5. Outcome of Project

1. Admin can log in and check the analysis .

2. Based on the analysis, company can draw conclusions about which places have a higher demand over taxi trips.

3. Cab company can check the analysis on the basis on days, weeks months and seasonal trends.

4. Maps are also provided to identify accurate locations.

6. Technology Stack

1. PyCharm community edition 2022.1.3

2. Power BI Desktop 2.116.884.0

3. MySQL 8.0 CE

7. Block Diagram

Thank You...!!