Bike Rides in 2022

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Divvy Bikes - CapStone Project

Contents

Bicycle usage specifics by Divvy clients in 2022

What is this all about?

CapStone Project: **Divvy Bikes**
for Google Data Analytics Professional Certificate

Purpose

To analyze specifics of Cyclistic bikes usage

to analyze the specifics of Cyclistic bikes usage by **annual members** and **casual** riders differently during **2022**

Data & tools

Dataset used: Cyclistic trip data*

Dataset:

- monthly archives for 2022
- cloud based
- public license

Tools:

- MS Excel
- SQL (Google BigQuery)
- Looker (Google Looker Studio)

*details are presented in Appendix section of this presentation

Data processing*

Original dataset included:

- 12 monthly tables with more than 5M entries
- data on date, geographics, trip duration, rider & bike type

Elaborated dataset included:

- rider & bike types
- extended dates

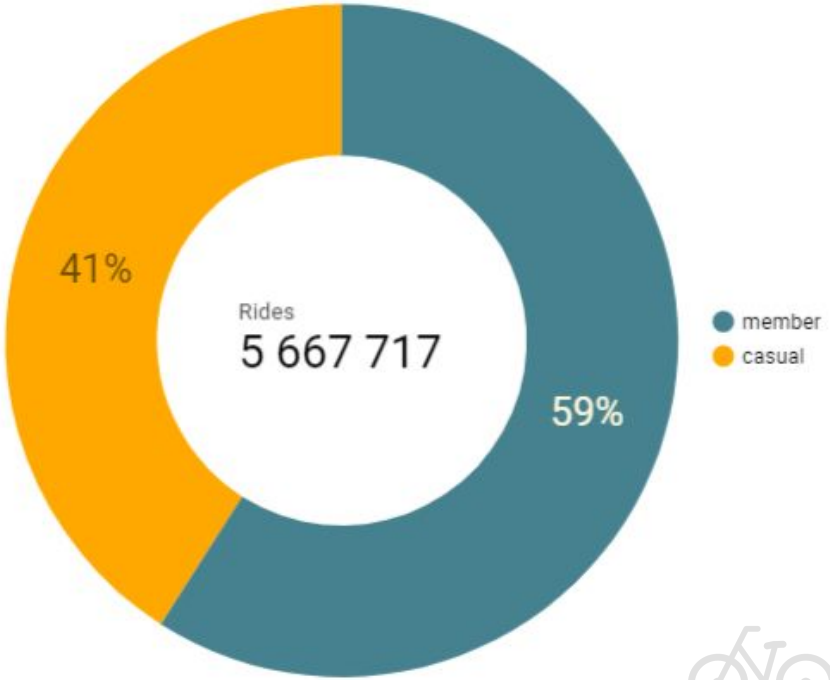
*details are presented in Appendix section of this presentation

Analytics

In 2022 there were 5,6M+ rides

Riders segmentation:

- **59%** of rides made by **annual members,**
- **41%** were shared by **casual** riders

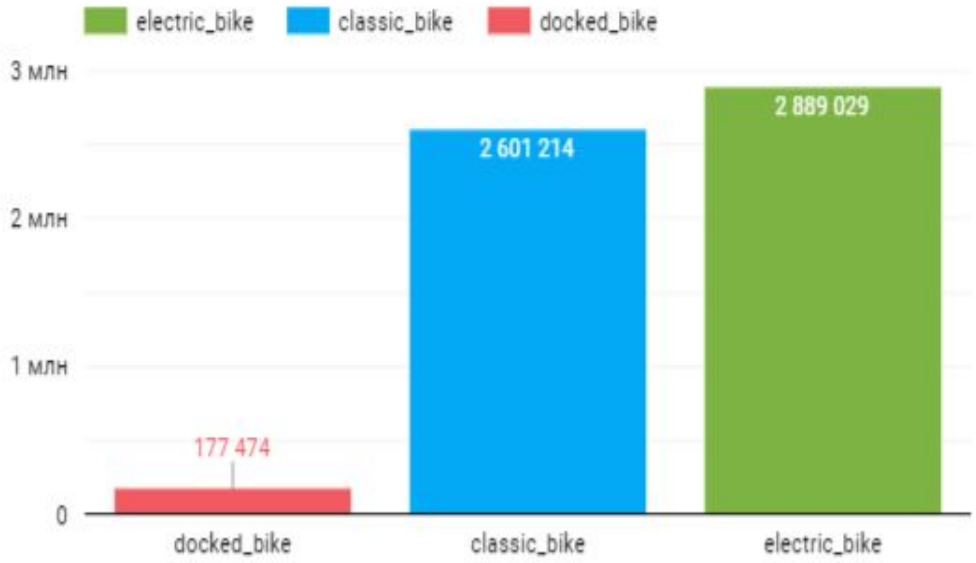


Analytics

Electric bikes gain popularity in 2022

Bike type preferences in 2022:

- **3%** docker bikes,
- **41%** classic bikes
- **56%** electric bike

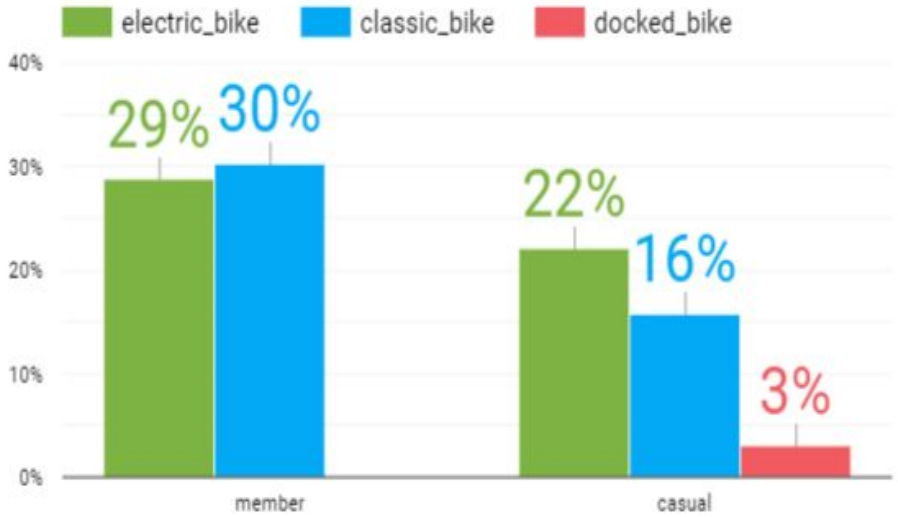


Analytics

Casual riders prefer electrics

Bike type preferences:

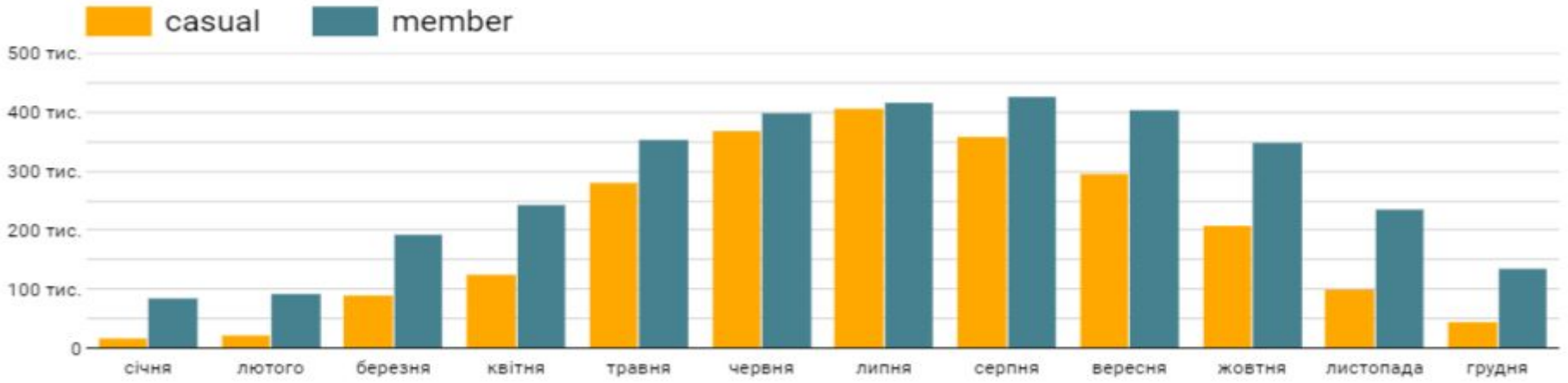
- -annual members yet prefer classic bikes a bit more,
- casuals like the electrics



Analytics

Yearly dynamics and trends

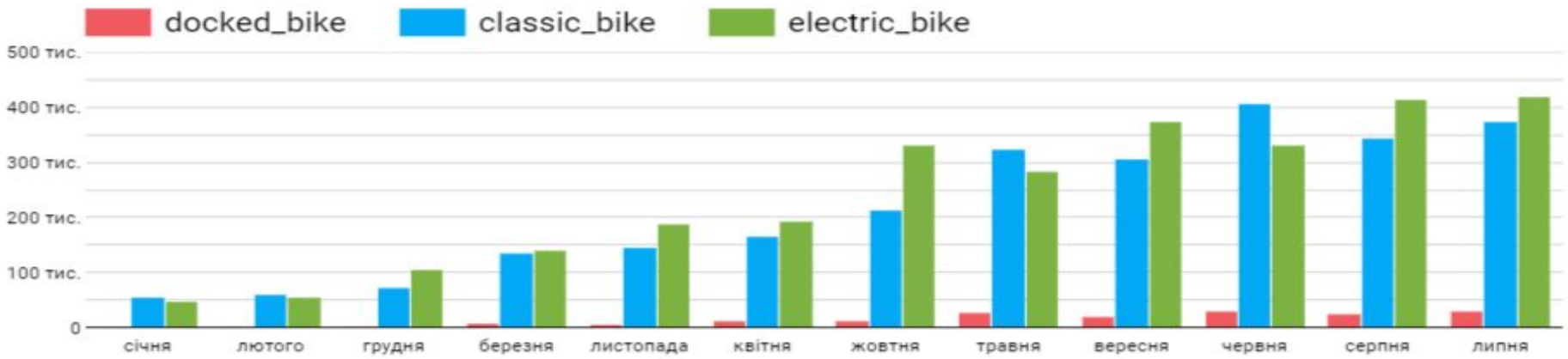
Casual riders were more active from May till October period, summer is the most active period for all the riders.



Analytics

Yearly dynamics and trends

In general, Electric bikes gain popularity in the second half of 2022, while dockers are just stepping into the game



Analytics

Casual riders prefer weekend activities*

- **Annual members** were using bikes more during the weekdays
- **Casual members** preferred weekends

* localization issue (translation): “Тиждень 1” = “Weekday 1” = Monday

Conclusion

1. Popularity of electric bikes grows for both rider groups
2. **Casual riders** prefer taking electric bikes on weekends
3. **Annual members** tend to use bikes more over the weekdays
4. In general, riders prefer warmer seasons, almost doubling the rides from May till October (inclusive) compared to the rest of year

Recommendations

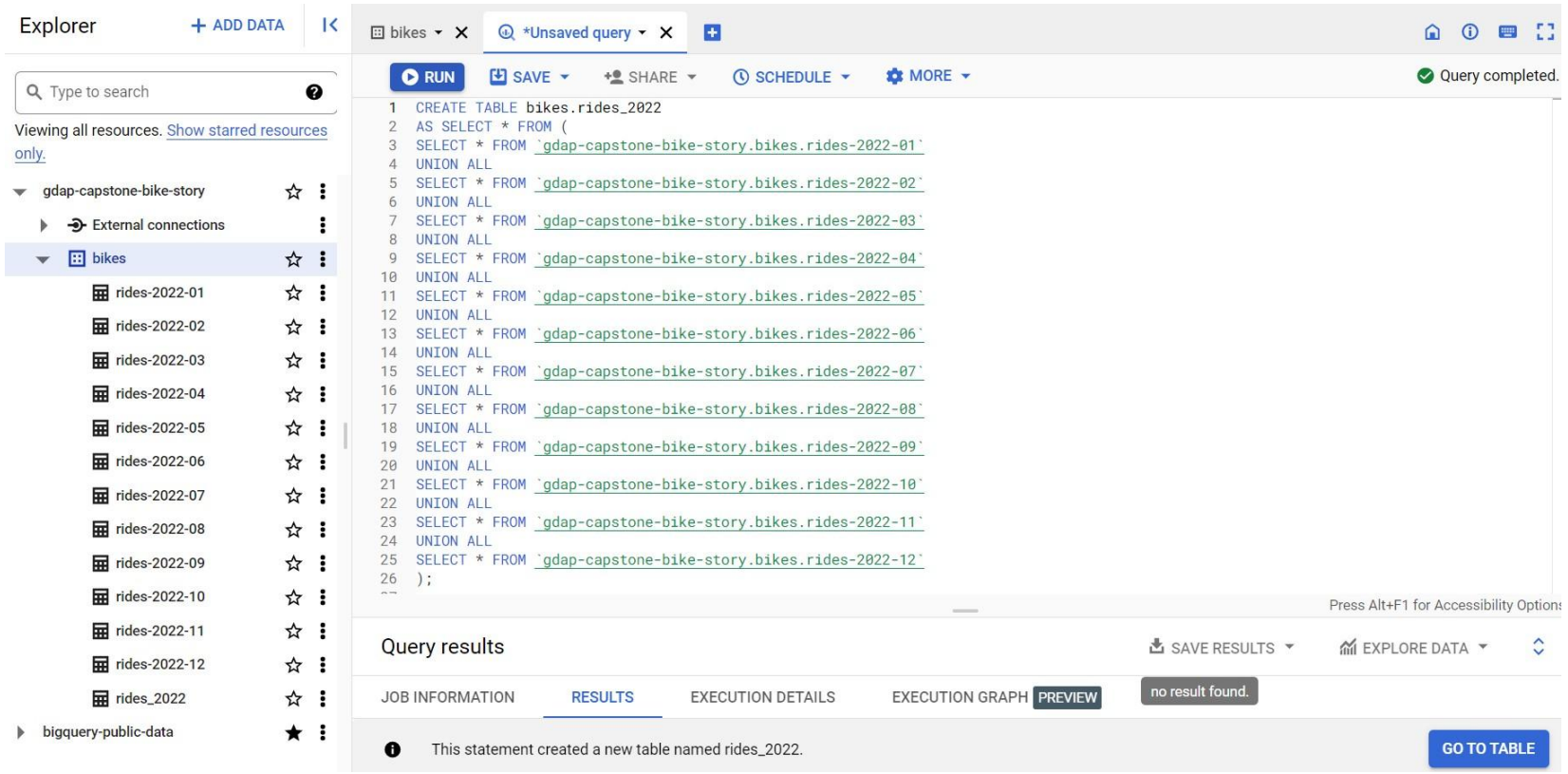
1. Analyse the physical inventory of **electric bikes** over weekends in the most user-crowded areas
2. Conduct a survey on **casual riders** preferences for potential loyalties in case of subscription proposals
3. Conduct a research on **docker bikes** use areas
4. Elaborate discount system for 3-, 5-, 7-days subscription proposals for **casual riders** prior to peak season

Appendix

Data manipulation & elaboration process

1. CSV-> **Excel**:
   a. Available: ride_id, rideable_type, started_at, ended_at, start_station_name, start_station_id, end_station_name, end_station_id, start_lat, start_lng, end_lat, end_lng, member_casual
   b. Created: year, month, day, date, trip_length_raw
2. Excel -> **CSV**
   a. Deleted: ride_id, started_at, ended_at, start_station_name, start_station_id, end_station_name, end_station_id, start_lat, start_lng, end_lat, end_lng
   b. Remained: rideable_type, member_casual, year, month, weekday, date, trip_length_raw
3. CSV -> **SQL** (BigQuery)
   a. 12 tables uploaded in format rides-XX-2022.
   b. 12 tables combined into a single one via UNION ALL.
4. SQL -> **Looker** (Google Reporting Studio)
5. Looker -> **Google Presentations**

Appendix: SQL query



Thank you!

Let’s answer some question?

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