

CYCLISTIC PROJECT

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Contents

1. Business task
2. Approach and analysis
3. Technical challenges
4. Analysis
5. Results
6. Recommendation

Business Task

General purpose:

Maximizing the annual members for the company's future success by converting the casual rides into the annual members

Business task:

Identify the differences between the way annual member and casual riders use

Cyclistic bikes

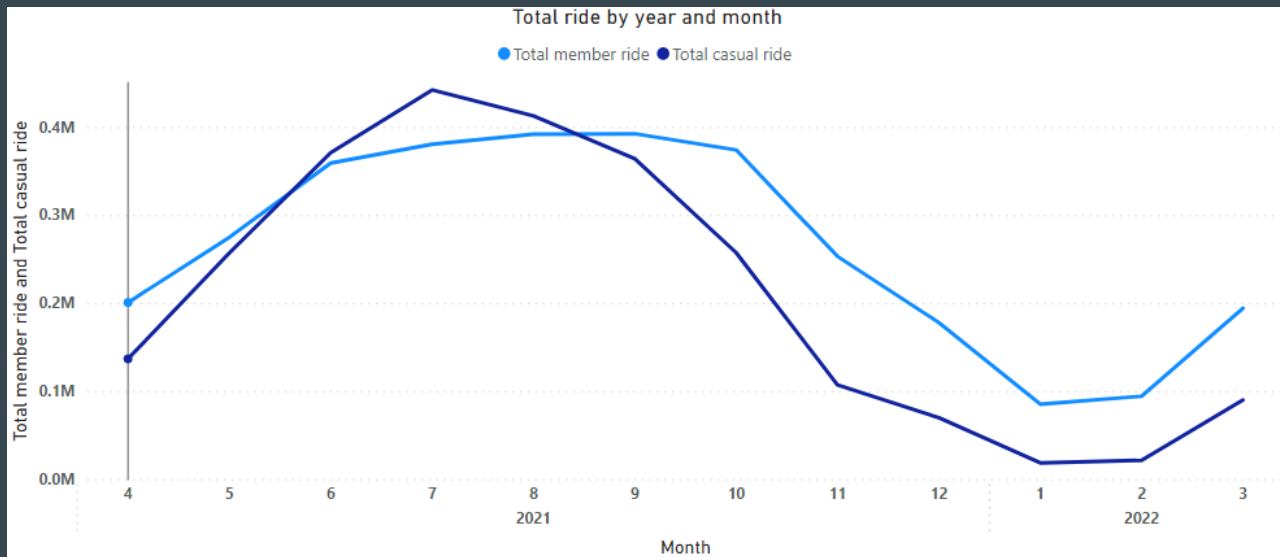
Approach and Analysis

1. Data source: previous 12 months of Cyclistic trip data
2. Formatted, cleaned and import to SQL server for analysis
3. The columns ride_id, started_at, ended_at, member_casual, rideable_type will be considered to answer questions
4. Statistical inference and graphical visualization will be employed

Technical challenges

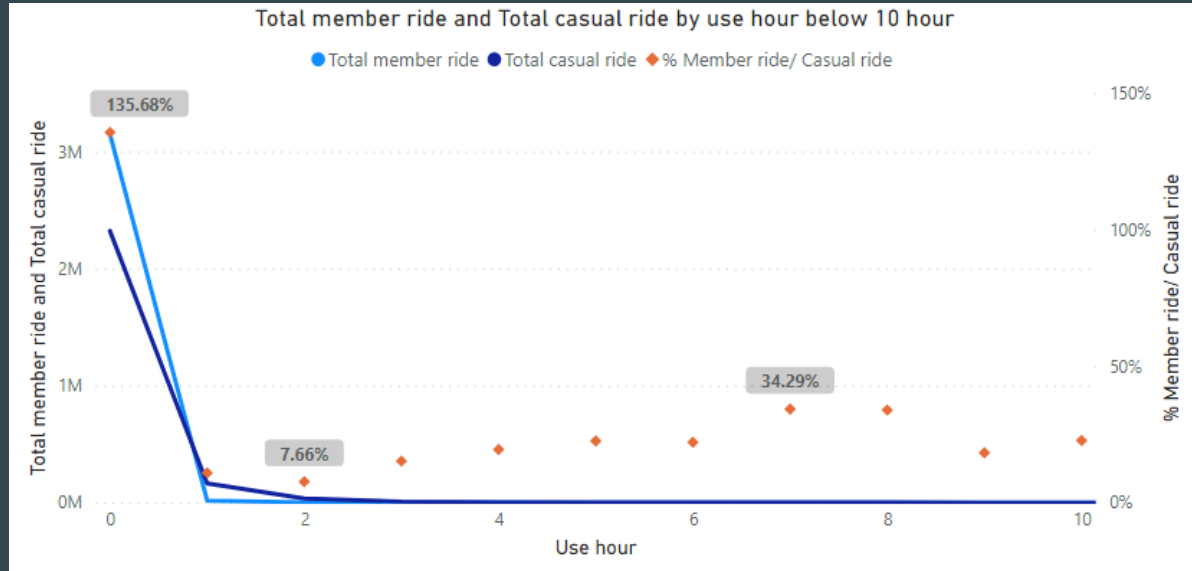
1. Trip data tables have missing values in the columns about location (start station, end station, latitude and longitude) so the metrics of location can't be considered
2. Trip data also will not be analyzed exactly about the use purpose of customers
3. The analysis will only focus on the differences about time metrics of trip of 2 customer types (annual members and casual riders) use Cyclistic bikes

Total ride by year month



The trend of total ride amount do not show much the different between members and casual riders

Total ride by use time (hour)

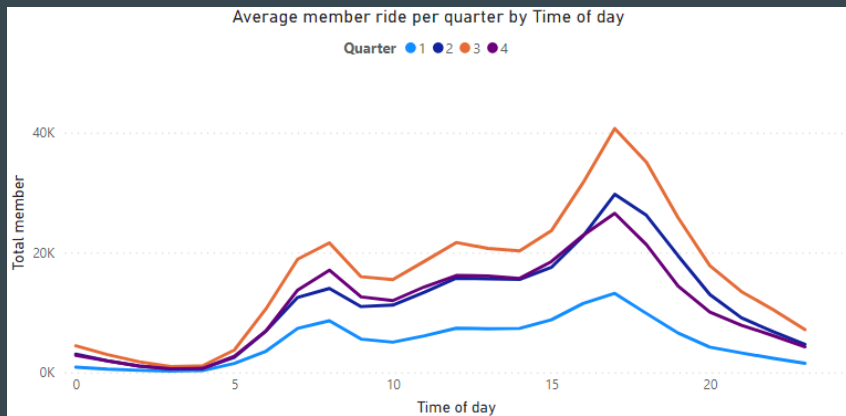


Below 1 hour:

- 99.22 % of member ride and 91.23 % casual rider ride
- Member ride is 35.68% more than casual ride

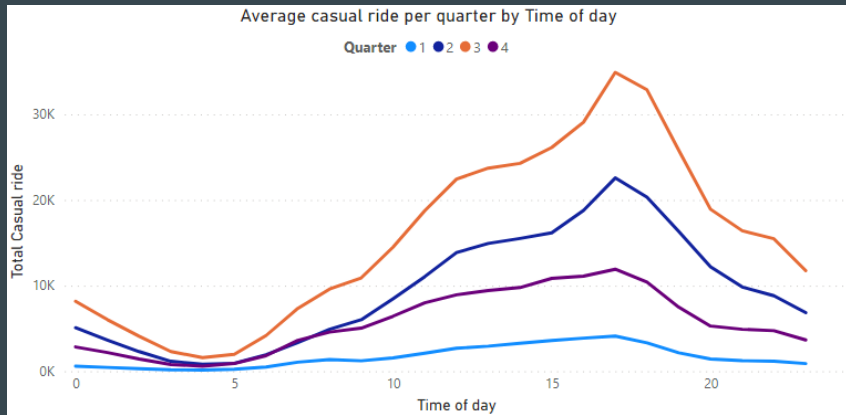
→ Focus on analyzing the member ride and casual ride below 1 hour

Ride by started time of day (use within 1 hour)

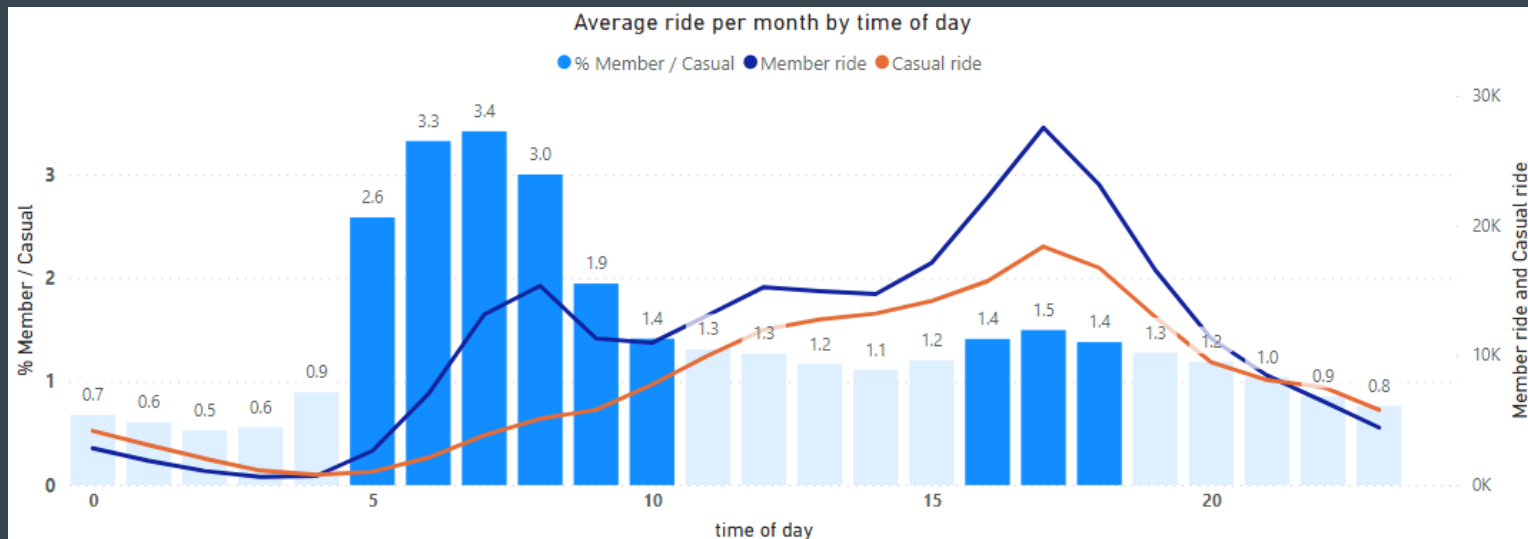


Members ride and casual riders ride by time of day have the same trend in each quarter

→ Compare average ride per month is acceptable

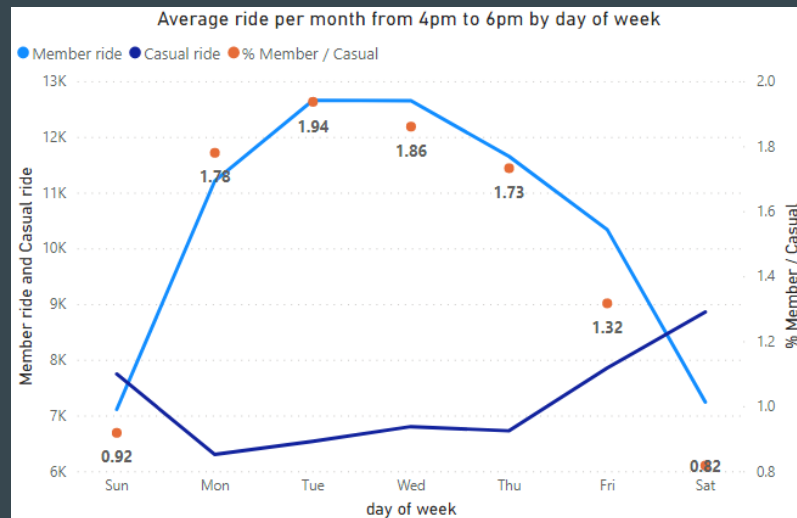
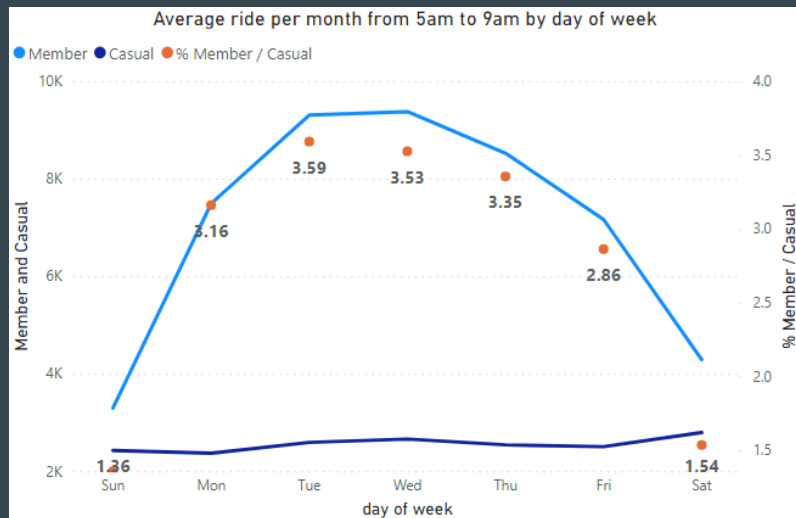


Ride by started time of day (use within 1 hour)



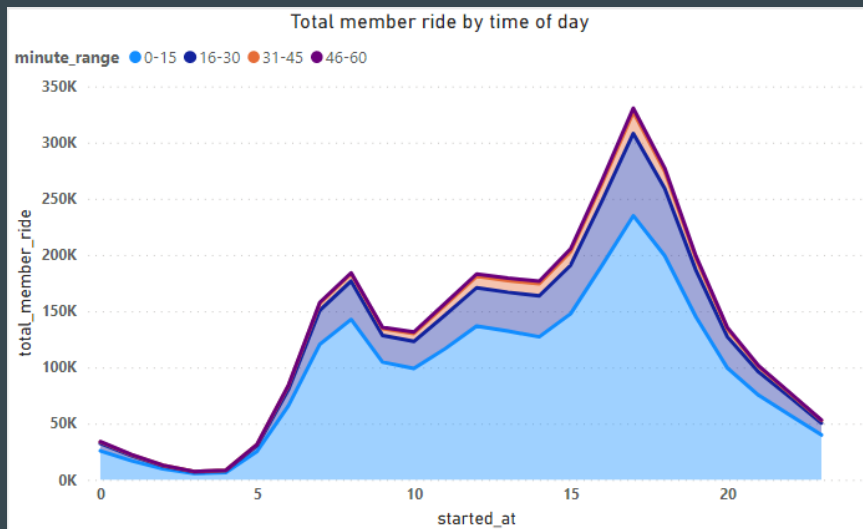
Members use bike more than casual riders at
5am – 9am (at least 2 times) and
4pm – 6pm (at least 40% more)

Ride by day of week (use within 1 hour)



With trip below 1 hour at 5am – 9am and 4pm – 6pm, annual member use more from Monday to Friday

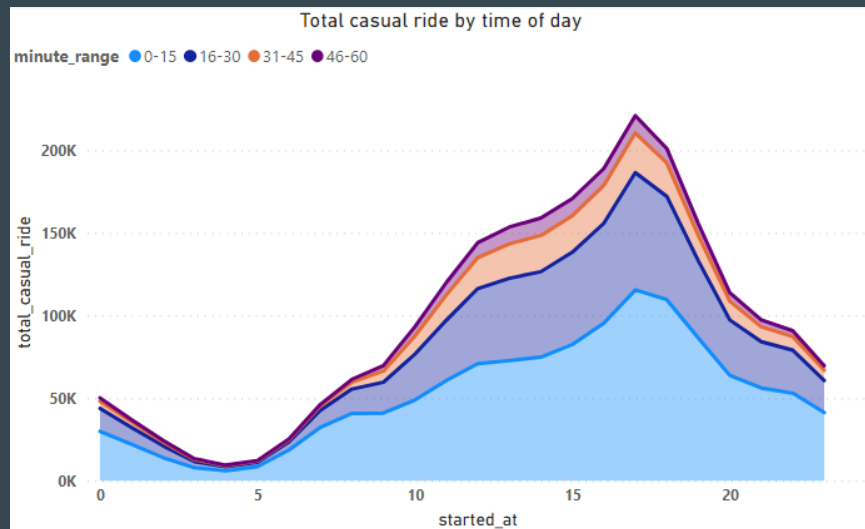
More about trip ride within 1 hour



Member trip:

0 - 15 minute: 73,85 %

16 – 30 minute: 20,09 %

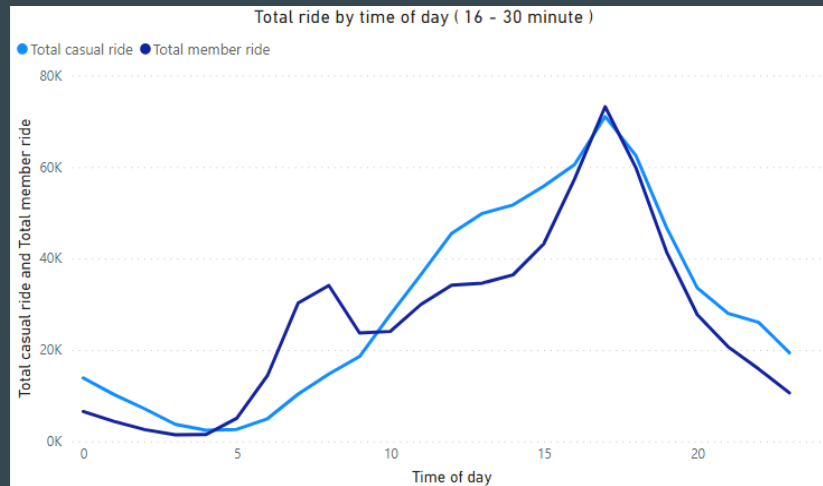
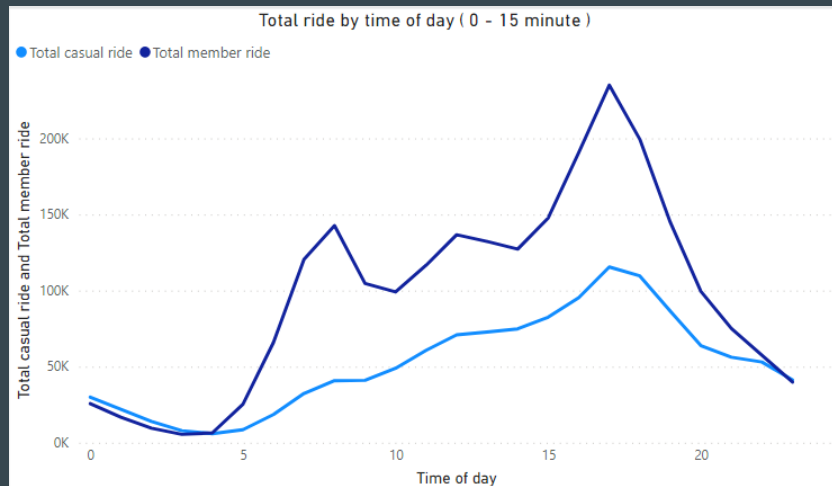


Casual rider trip:

0 - 15 minute: 50,81 %

16 – 30 minute: 30,21 %

More about trip ride within 1 hour



With trip within 30 minutes:

- Members use more than casual rider at 5 am – 9 am
- Members and casual riders both use much at 4 pm – 6 pm (especially 16 – 30 minutes trip)

Final results

1. Annual members use Cyclistic bike for short trip (within 30 minutes) – 93,22 % member ride vs 72,98 % casual ride
2. With short trip, annual members use significantly different from casual rider at 5 am to 9 am from Monday to Friday
3. Annual members and casual riders both use much at 4 pm to 6 pm from Monday to Friday

Recommendation

For converting into annual members, focus to casual riders use Cyclistic bikes:

- Within 30 minute at 4 pm – 6 pm
- Within 30 minutes at 5 am – 9 am from Monday to Friday