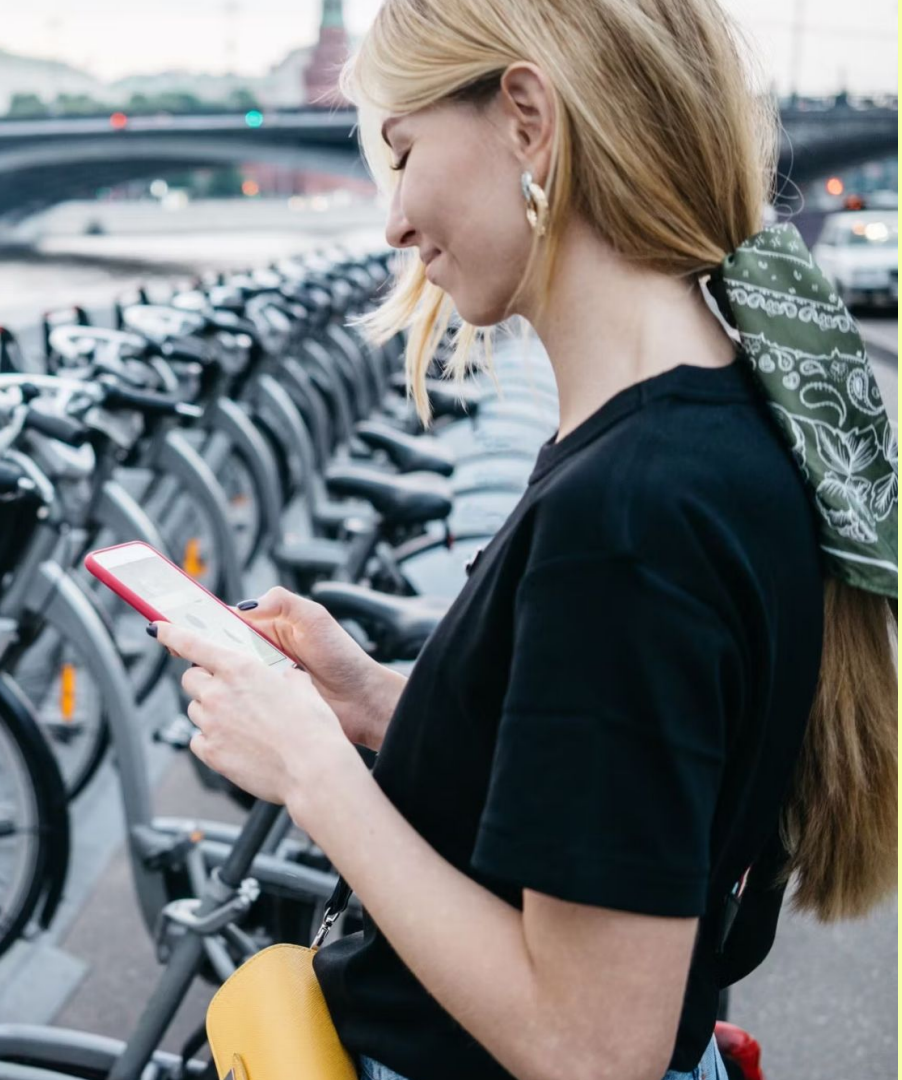


BIKE SHARING

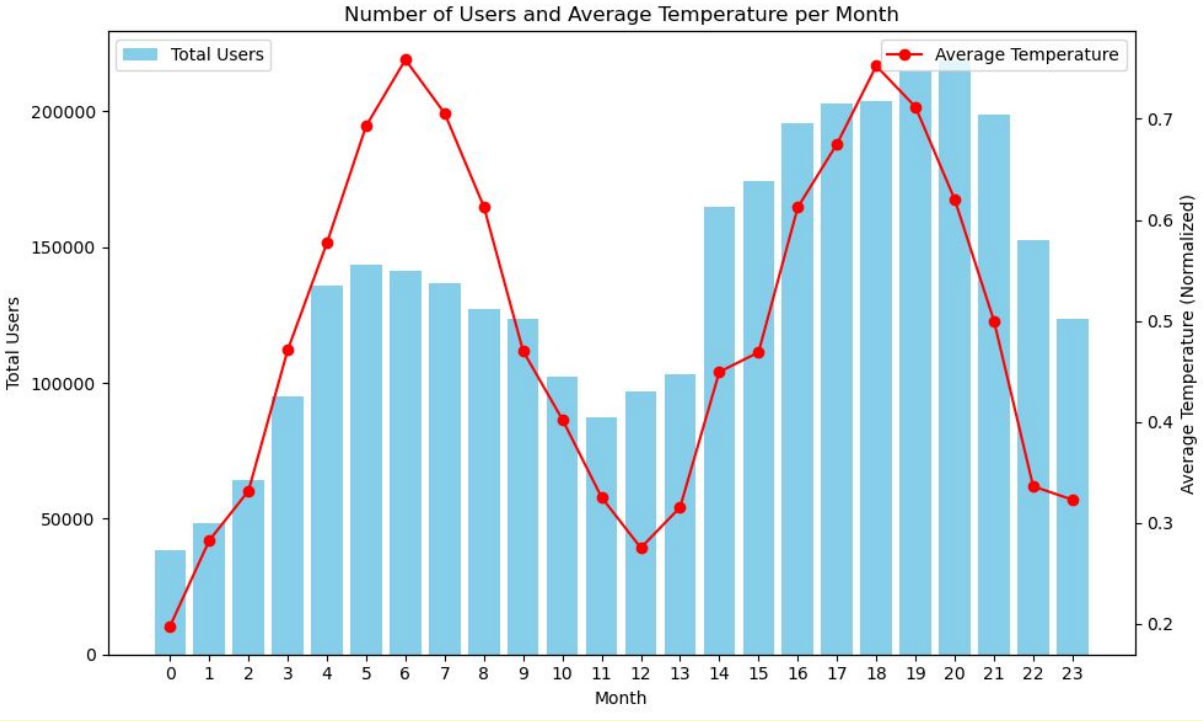
Bana Konstantin Lucie To Van

Project overview

We are a company that owns rental bikes and would like to be able to anticipate high demands to make sure to have enough bikes to be rented.

We need to identify peak times and weather conditions when the most bikes are rented out.

Global Data - Washington DC



15 rainy days in 2011
6 rainy days in 2012

20°C on average in 2011
21°C on average in 2012

on average in the 2 years :

12°C 22°C 29°C 17°C

Hypothesis

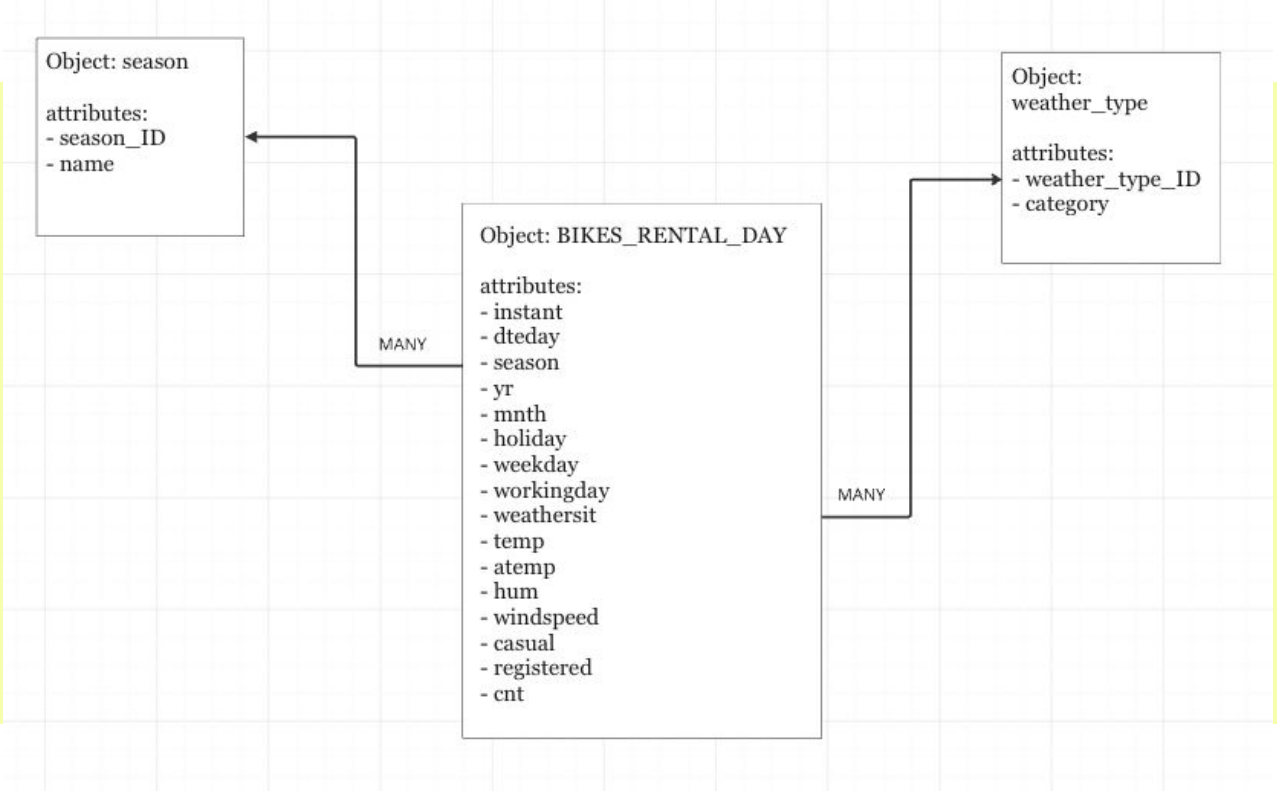
Hypothesis 1:

Rental-rate is the highest during summer season.

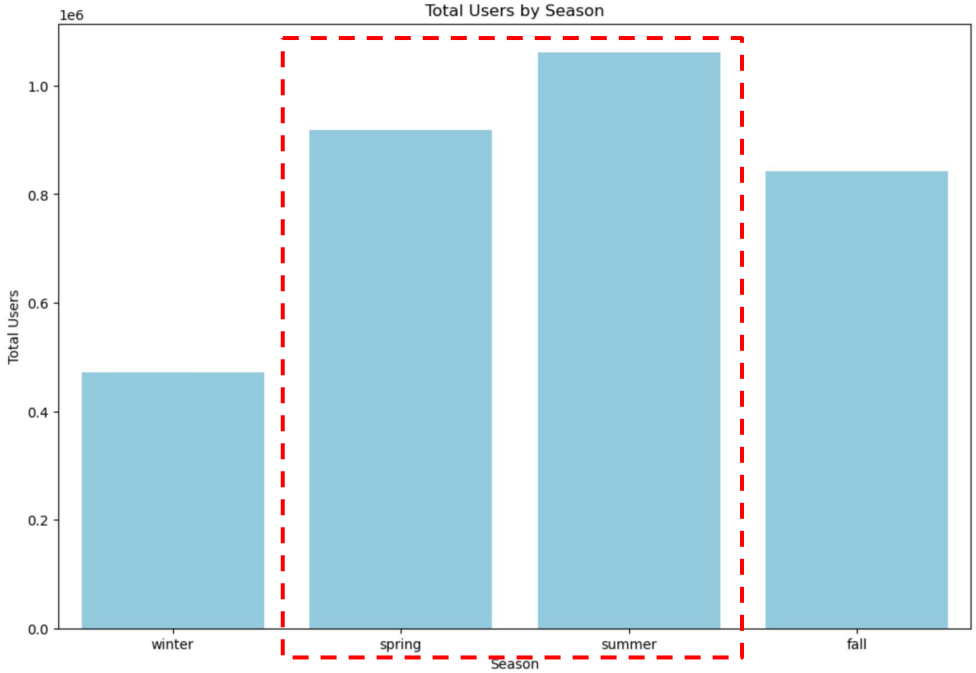
Hypothesis 2:

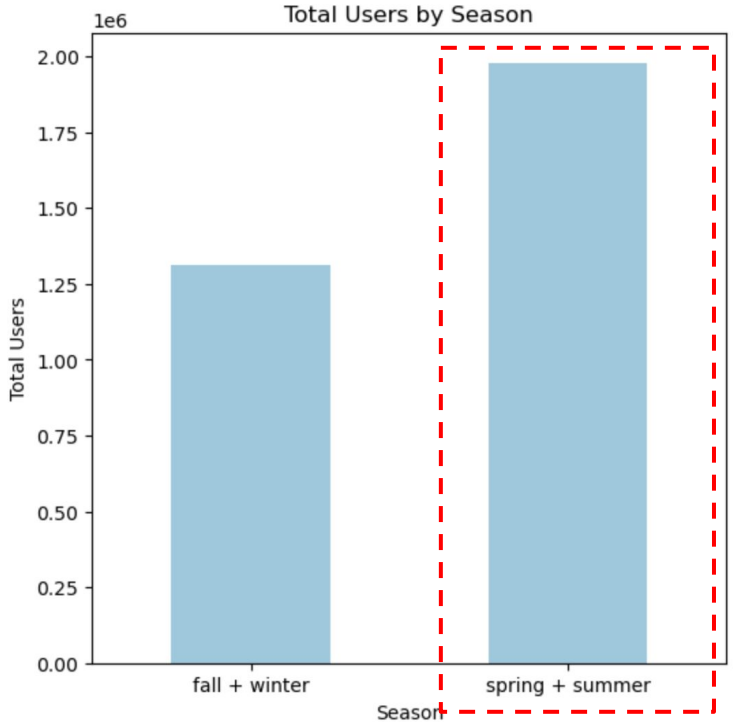
No matter the weather, there is minimal impact on registered bike users' behavior.

Entity-Relational-Model

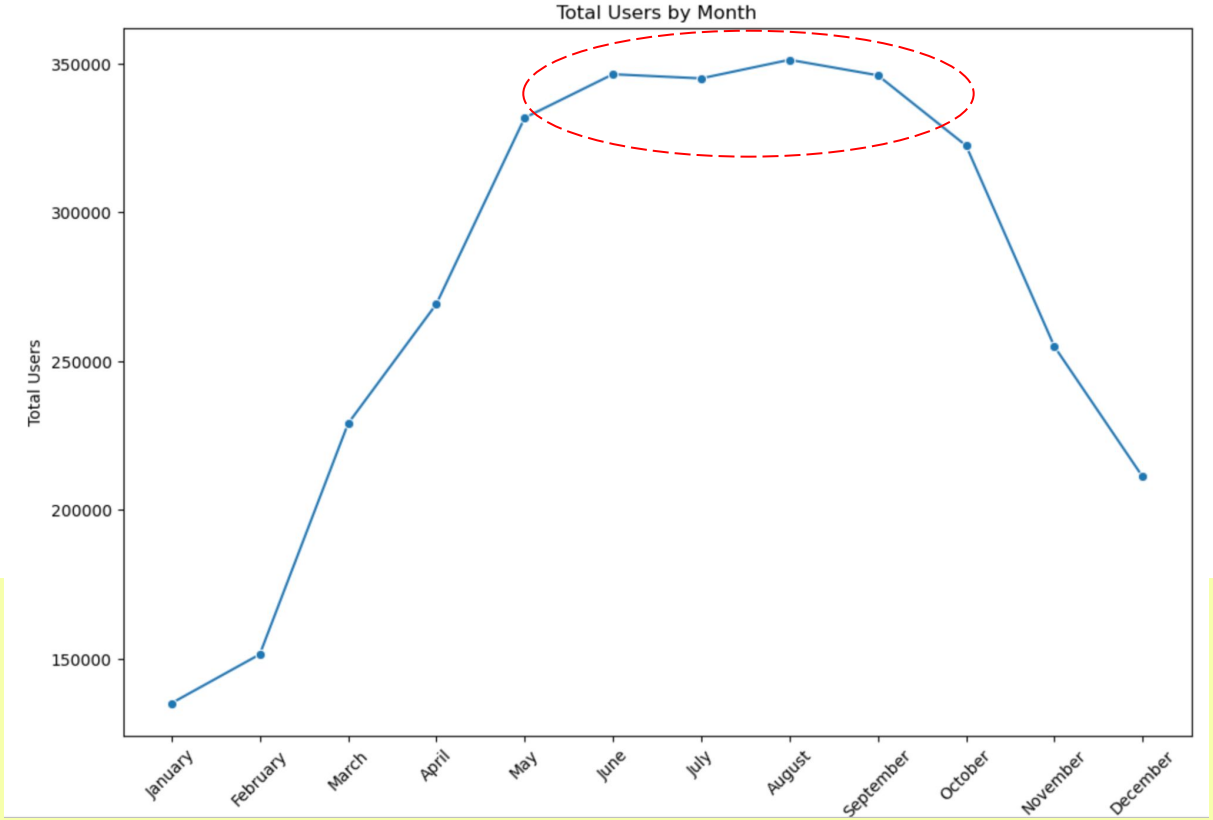


Users and seasons





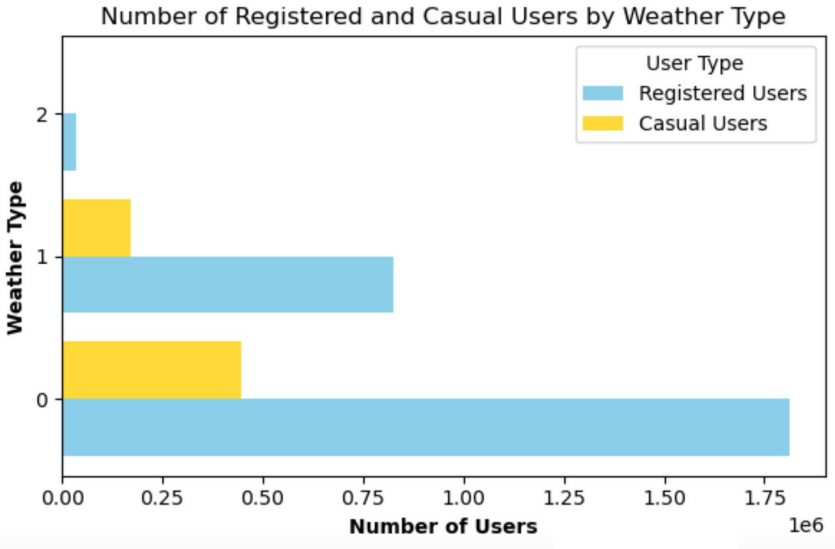
Users and months



Months with the most users are from April to September

Impact of Weather on Bike Usage (Registered vs. Casual Users)

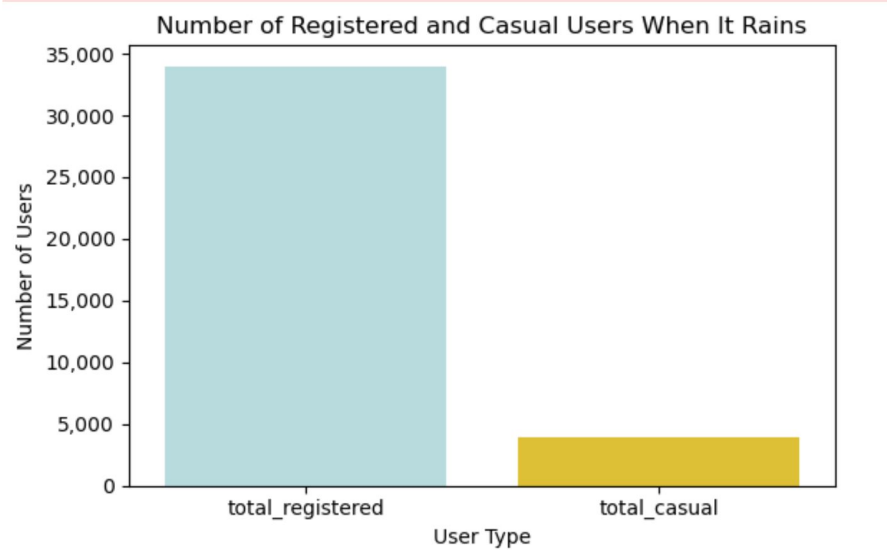
This analysis focuses on the number of registered and casual bike users across different weather types. The data is categorized by weather conditions such as clear, cloudy, and rainy days.



Impact of Rain on Bike Usage (Registered vs. Casual Users):

Registered Users: Even during rainy conditions, the number of registered users remains relatively high, indicating that they continue to bike despite the rain.

Casual Users: Casual users are notably less likely to bike in rainy conditions. The significant drop in their numbers during rain further emphasizes their sensitivity to adverse weather.



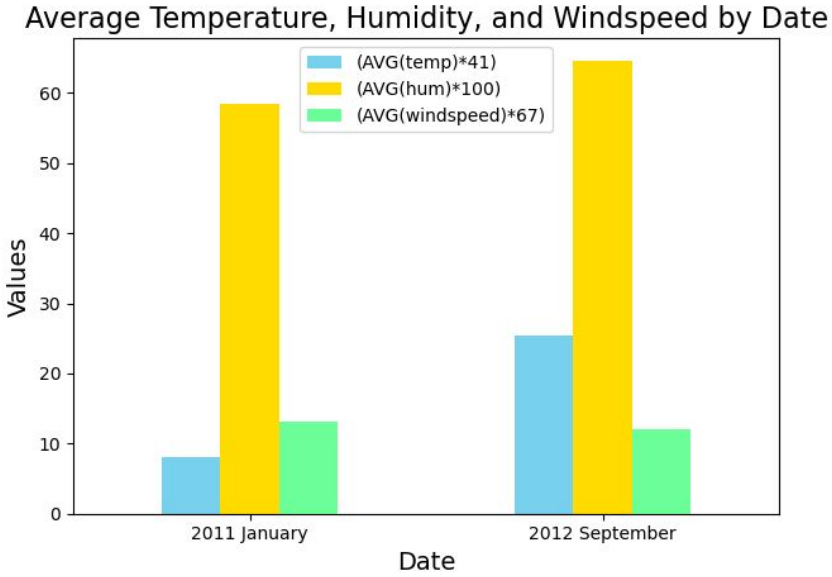
Weather information

Over this 2-year period, the best renting month was September 2012, while the worst was January 2011.

22 days vs. 17 days

8 days vs. 13 days

0 vs. 1 day



Major Obstacles

- Loading the dataset into MySQL

  → importing the csv-file, but also matching everything concerning the creation of tables and the proper insertion of the content
  → dealing with error messages (also referring to foreign key constraints)

- Understanding the data we are working with and formulating fitting hypotheses

- Making sure classification provided in the data set is consistent

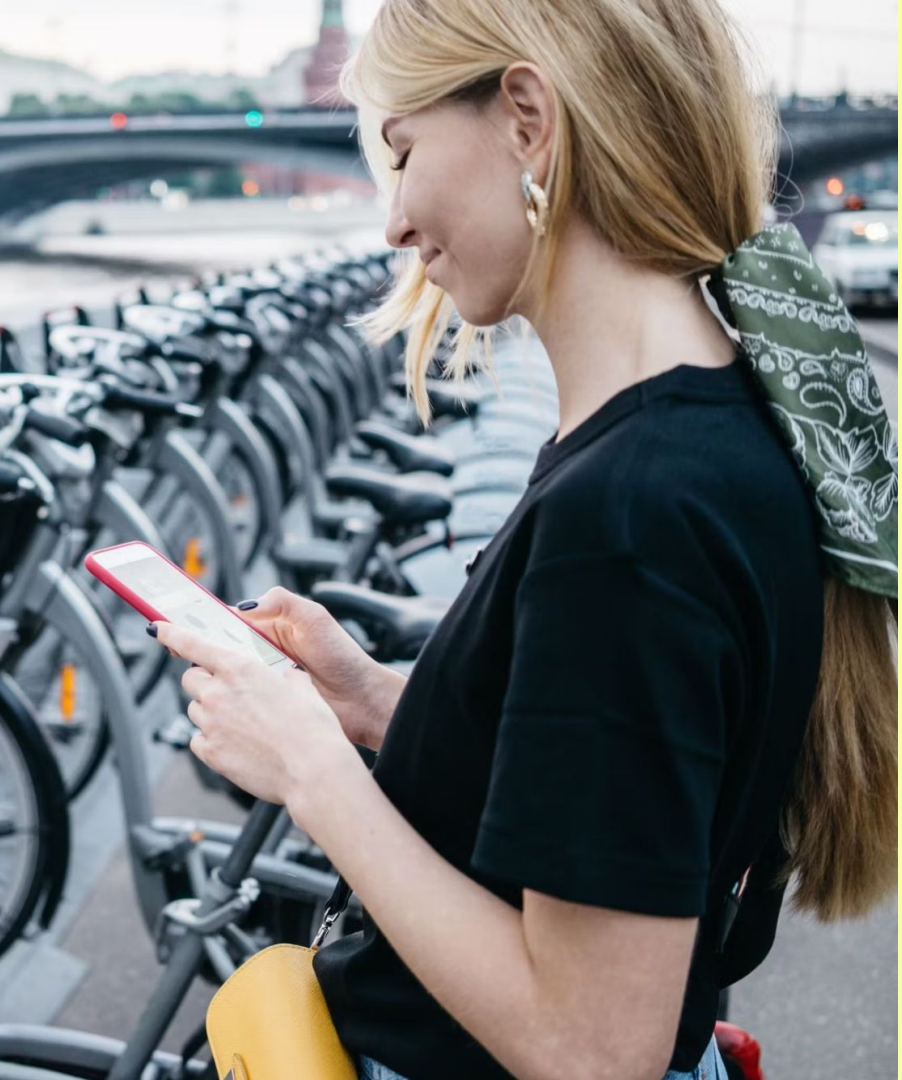
- Importing SQL into Jupyter Lab

Conclusions & Business Implications

1. Rental-rate is the highest during summer season. ✓

2. No matter the weather, there is minimal impact on registered bike users' behavior. ✗

⇨ Making sure bike availability is assured during peak seasons



THANK YOU

Bana Konstantin Lucie To Van

Sources:

- **pictures:** https://www.istockphoto.com/fr/photos/morning-bike-ride-city
- **dataset:** https://archive.ics.uci.edu/dataset/275/bike+sharing+dataset
- **our trello:** https://trello.com/b/paH3IE6a/ironhack-week4-sql

Bana Konstantin Lucie To Van