Project 1: Model Building Techniques *(Final Project)*
Class: DATS 6101- Intro to Data Science
Date: 11/17/2022
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Project Proposal

We are analyzing a shared bike dataset from a company called CoGo. The CoGo Bike share system was launched in July 2013 and serves several areas in Ohio (Columbus, Bexley, Upper Arlington, Grandview Heights, and Easton).

a) The research topic

Providing suggestions supported by data to boost the profit margin for CoGo- a bike-sharing company by analyzing the rental patterns such as selecting bike types, customer focus etc.

b) The SMART question(s)

- How much time will the customer (Annual membership or Casual) ride the bike if travelling from a certain station to another, while using a particular bike?
- Which Bike type (Electric or Manual) will the customer (Annual membership or Casual) use if travelling from a certain station to another?
- What type of customer (Annual membership or Casual) will travel from a certain station to another, while using a particular bike?

c) The source of data set(s) and observations

- *Observations:* 35,000+
- *Coverage:* Quarter 2 and Quarter 3 (6 months) [Not covering the entire year due to the large size of the data]
- *Features:* 10+ columns [Rider ID, Bike type, Rented bike start time, Rented bike end time, Start station name, Start station ID, End station name, End station ID, Start station latitude, Start station longitude, End station latitude, End station longitude, Member Type]
- *Additional columns/ Calculated fields:*
    - A continuous variable- ***Time Difference*** between *Rented bike start time* and *Rented bike end time*
    - A categorical variable- ***Time period of the day (Morning, Afternoon, Evening) etc.***

- Data Source: here

Note: The price information is not provided in the dataset (though available on the mobile app and website) and since Time period will be sufficient for our analysis hence, we will not be creating price column.

d) The link to the team's GitHub repository

Team GitHub Link: here