Maximizing Bike-Sharing Program Effectiveness
Capstone 2 Project Proposal
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Introduction:

The purpose of this project is to find when the best times and conditions for applying sales to bike share programs to keep ridership at higher levels.

Problem:

Bike share programs tend to have a payment model that charges a flat rate for usage. While this model works, there are flaws including:

- People are less likely to use the programs later in the day.
- People are less likely to use the programs during poor weather.
- Higher demand during nice weather at peak hours leads to high demand for bikes while there is a fixed supply.

The reason for my project will then be to find and group times of similar ridership and use these to propose a variable payment method to lower the prices when demand is low and increase prices when demand is high to maximize the value gained.

Data:

Client - Bike Share Companies (JUMP Bikes, Motivate, etc.)

Source - UC Irvine Machine Learning Repository
(https://archive.ics.uci.edu/ml/datasets/bike+sharing+dataset)

Envisioned Approach:

- Look at ridership spreads across a variety of condition types.
- Find what conditions lead to the greatest change in ridership.
- Identify a clustering model that effectively separates groups based on expected ridership as a base for a new payment model.

Deliverables:

- Python code relating to the project.
- A final written report with groups identified.
- A final presentation made to be shared with the executive boards of the Bike Share Companies.