Divvy Availability Predictor

THE WHEELS ON THE BIKE GO ROUND AND ROUND

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Description/Motivation

Will a station run out of bikes?

Divvy

Restock at-risk stations

Riders

Trip Planning

Data Description

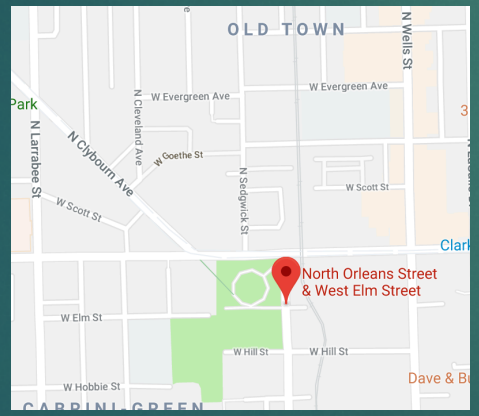
- Sourced from **City of Chicago Data Portal API**
  - **135 Stations**
  - **7 MM total data points**
  - **10 minute resolution**
- Features
  - Season (month)
  - Time of Day
  - Current Availability
- Response
  - No availability within 30 minutes

Model Description

- Logistic Regression Model
  - Independent by station
  - Predictors
    - Month
    - Weekday/Weekend
    - Rush Hour
    - Current % Full
- Defining Success
  - Returning probability, not prediction
  - Metric: AUC
    - 0.92-0.98 for all models

Data Insight

- Current Availability is generally best predictor
- Less likely to run out during cold months (December-March)
- Rush hour affects stations differently based on location



Residential Area
Shortage more likely in AM

Commercial Area
Shortage more likely in PM

Questions?

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