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# Bike Share Analytics

— Bay Area Bike Program —

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# To be covered

Overview

Data Preparations

Data Loading

Merging datasets

Bike Share Metrics & Insights

Potential new users converting as Subscribers

Conclusions

Limitations with the dataset

# Overview

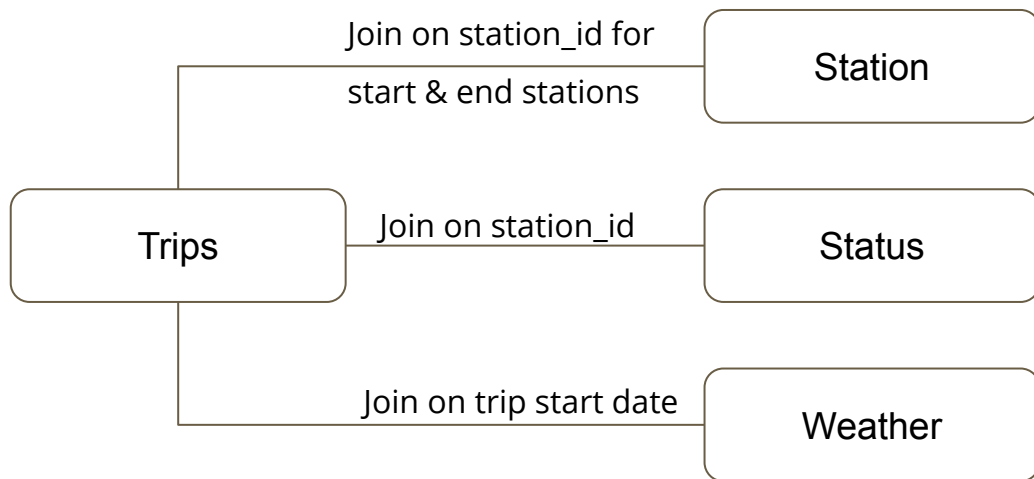
BikeShare program provides station-to-station trips around San Francisco city to make it as convenient as possible to integrate biking into your daily life.

To avail the system, a biker can choose to be either a **Subscriber** with monthly or annual plan or pay-per-ride **Customer** with payment done at the station with credit card before the ride.

# Data Preparations - Data Loading

- Station : City, Id, Name, Installation\_date
- Status: station\_id,bikes\_available,docks\_available,time
- Trip: Bike Id, start/end date, Start/End Station name,  
user\_type(Customer/Subscriber), zip code
- Weather: date, zip code,

# Data Preparations - Merging Datasets



# Metrics

## Overall

Trips <b>171,792</b>	Bike Routes <b>1,677</b>	Bikes <b>681</b>	Stations <b>70</b>
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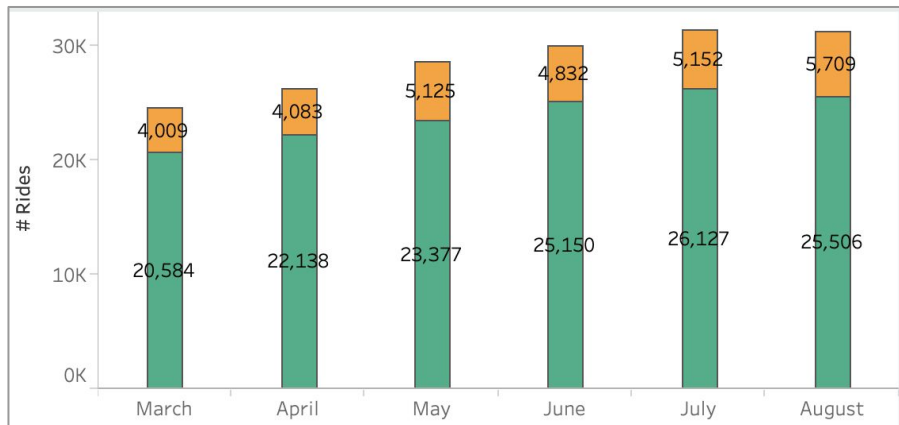
## Subscribers

Trips <b>142,882</b>	Bike Routes <b>1,617</b>	Bikes <b>680</b>	Stations <b>70</b>
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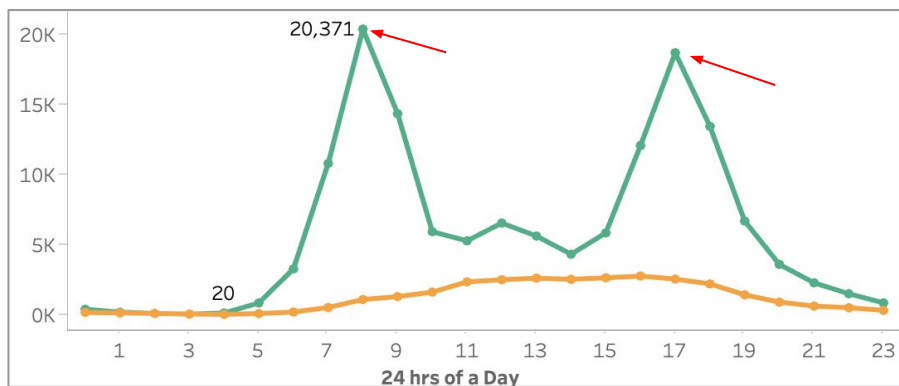
## Customers

Trips <b>28,910</b>	Bike Routes <b>1,591</b>	Bikes <b>676</b>	Stations <b>70</b>
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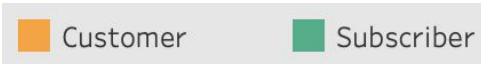
# Metrics - Trend



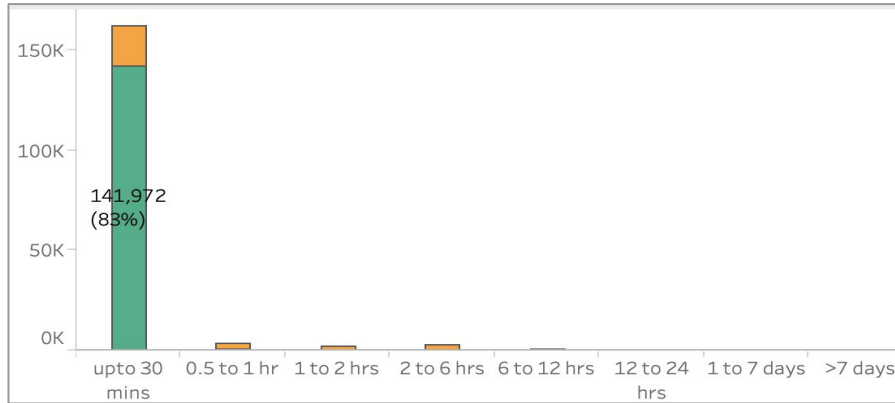
~ 80% of rides are done by subscribers



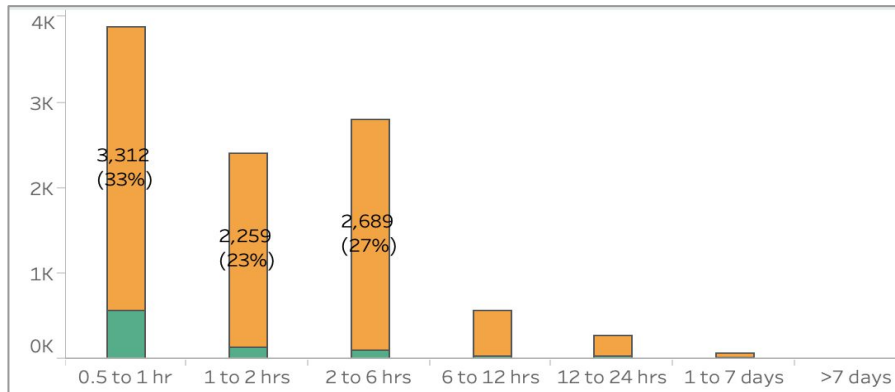
Most of the Subscribers are working professions contributing >90% trips



# Analysis by Trip Duration



Avg usage duration of subscribers seems to be less than 30 mins



Customers usage duration is pretty much higher than subscribers

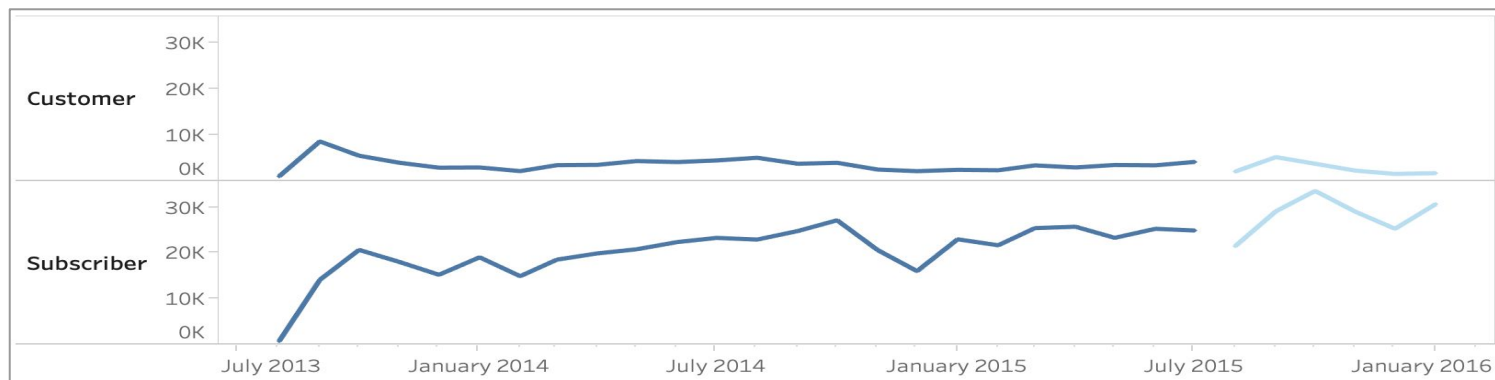
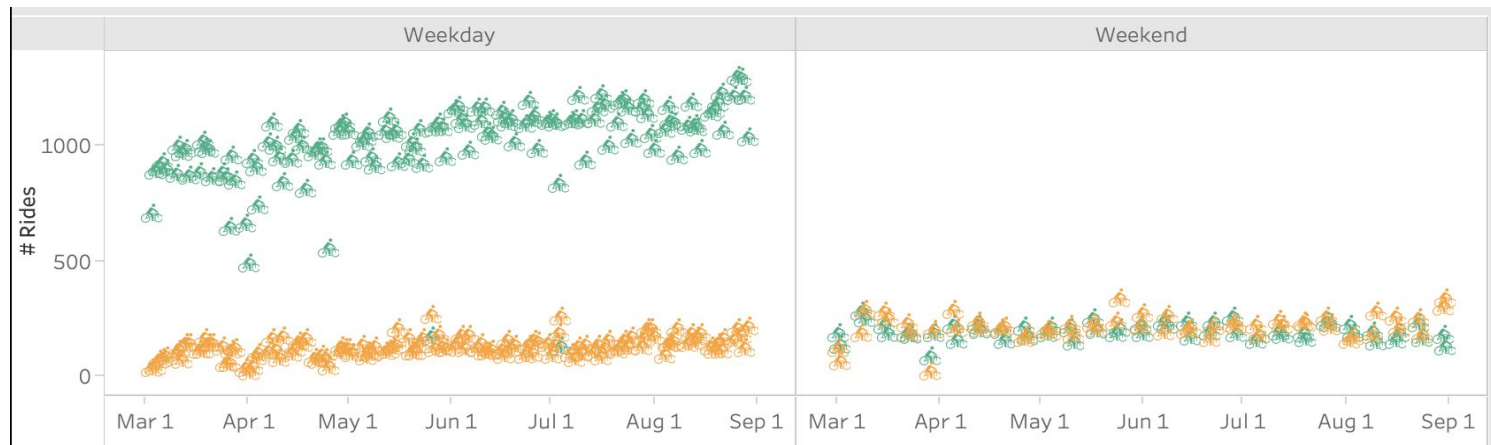


# New Users Analysis

	Customer	Subscriber
Harry Bridges Plaza (Ferry Building) to Embarcadero at Sansome	813	
Townsend at 7th to San Francisco Caltrain (Townsend at 4th)		1,461
San Francisco Caltrain 2 (330 Townsend) to Townsend at 7th		1,309
Embarcadero at Sansome to Steuart at Market		1,000
2nd at Townsend to Harry Bridges Plaza (Ferry Building)		1,003
2nd at South Park to Market at Sansome		999
Harry Bridges Plaza (Ferry Building) to 2nd at Townsend		889
Market at 10th to San Francisco Caltrain (Townsend at 4th)		939
Steuart at Market to San Francisco Caltrain (Townsend at 4th)		916
San Francisco Caltrain (Townsend at 4th) to Temporary Transbay Ter..		913
Market at Sansome to 2nd at South Park		893
San Francisco Caltrain (Townsend at 4th) to Market at Sansome		889
Steuart at Market to Embarcadero at Sansome	181	
Embarcadero at Sansome to Harry Bridges Plaza (Ferry Building)	348	
Embarcadero at Sansome to Embarcadero at Sansome	540	
Harry Bridges Plaza (Ferry Building) to Harry Bridges Plaza (Ferry Bu..	409	
Embarcadero at Vallejo to Embarcadero at Sansome	321	
Harry Bridges Plaza (Ferry Building) to Embarcadero at Vallejo	182	
Embarcadero at Sansome to Market at 4th	208	
Market at 4th to Embarcadero at Sansome	180	
University and Emerson to University and Emerson	272	

New users of highlighted bike routes are more likely to subscribe the bike share program based on the existing data

# Subscribers vs Customers



# Conclusions

- ~88% of registered riders on weekdays are Subscribers
- Customers using bike share program on weekdays at office timings can potentially convert to subscribers
- Starting from 2015, customer growth is slowly increasing
- New users of the top 10 subscribers bike routes are more likely to subscribe
- ~85% of people using bike share program on weekends are Customers
- All the cities other than San Francisco has pretty same trend for customers and subscribers

# Challenges/Questions?

- We don't have user level details like user\_id, age, gender, user\_location

More metrics Interesting for the business would be

1. For the top usage stations, can we deploy more docking stands
2. For the low usage station, we need to investigate is less docking stands are the reason for low usage

