

# Data Analytics Case Study

Austin Bikeshare Data  
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# Preparation

Data Source : ``bigquery-public-data.austin_bikeshare.bikeshare_trips``  
``bigquery-public-data.austin_bikeshare.bikeshare_station``

## Data Cleaning and Analyzing



Google  
Big Query

## Data Visualization and Dashboard



Google Data Studio

## Presentation



Google Slides



# Defining the Problems

From 2021...

**1.**

What the largest segment of subscriber type ?

**2.**

How was the monthly trend of the trips ?

**3.**

Top 5 frequently visited bike stations ?



# Data Preparation

Query Result

Query



```
SELECT
  trip_id,
  subscriber_type,
  start_time,
  start_station_name,
  end_station_name,
  duration_minutes
FROM `bigquery-public-data.austin_bikeshare.bikeshare_trips`
WHERE start_time >= '2021-01-01'
AND subscriber_type is not null
```




















trip_id	subscriber_type	start_time	start_station_name	end_station_name	duration_mi...
23898746	Annual	2021-04-18 15:10:03 UTC	East 5th/Broadway @ Capital ...	East 5th/Broadway @ Capital ...	66
24489052	Annual Membership	2021-07-04 12:24:39 UTC	East 5th/Broadway @ Capital ...	East 5th/Broadway @ Capital ...	20
24604114	Annual Membership	2021-07-17 20:41:54 UTC	East 5th/Broadway @ Capital ...	East 2nd/Pedernales	5
24604029	Annual Membership	2021-07-17 20:32:31 UTC	East 5th/Shady @ Eastside Bu...	East 5th/Broadway @ Capital ...	9
25045112	Annual Membership	2021-09-05 20:31:30 UTC	11th/San Jacinto	6th/Chalmers	20
25096682	Annual	2021-09-11 12:17:09 UTC	Rosewood/Angelina	Rosewood/Chicon	2
25097967	Annual	2021-09-11 13:47:31 UTC	East 5th/Broadway @ Capital ...	6th/Chalmers	6
25096709	Annual	2021-09-11 12:19:20 UTC	Rosewood/Chicon	East 6th/Pedernales	51
25684812	Annual Membership	2021-11-19 19:49:59 UTC	16th/San Antonio	10th/Red River	14



# Visualization and Insight



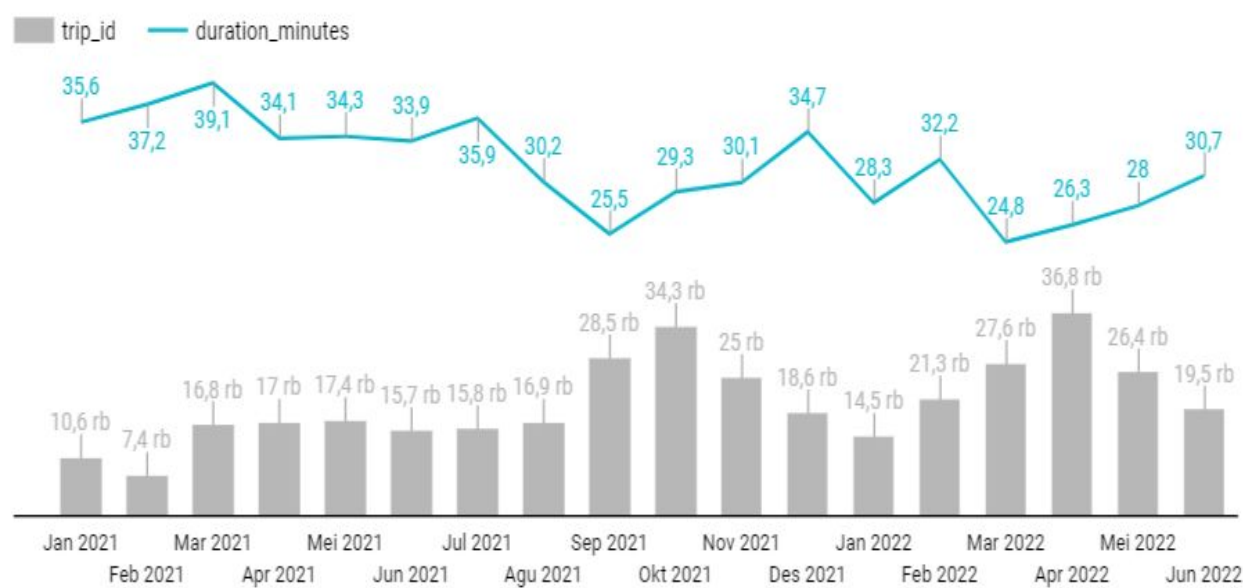
## Throughout Jan 2021 - Jun 2022, most of our trips came from the Student Membership users

subscriber_type	trip_id ▾	duration_minutes
Student Membership	118,2 rb 	2 jt 
Local365	69,2 rb 	1,6 jt 
Local31	59 rb 	2 jt 
Explorer	30,7 rb 	1,3 jt 
Pay-as-you-ride	27 rb 	1,3 jt 
3-Day Weekender	22 rb 	748,6 rb 
24 Hour Walk Up Pass	21,5 rb 	1,3 jt 
Single Trip (Pay-as-you-ride)	16,7 rb 	954,8 rb 
U.T. Student Membership	5,2 rb 	80,1 rb 
Local365+Guest Pass	317	4,7 rb 
Total keseluruhan	370 rb	11,3 jt

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Our Local365, Local31, Explorer, Pay-as-you-ride, and 24 Hour Walk Up Pass membership are still worth to be focused on our campaign.

Despite not having high trips count but they having sum duration more than 50% from sum duration of Student Membership which is the largest segment of subscriber type.



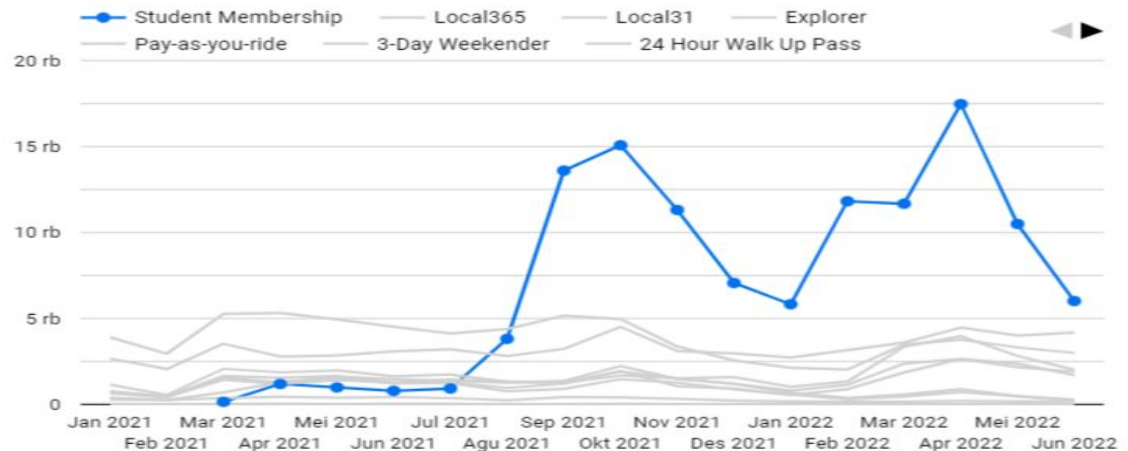
In 2021, highest trips count occur on Oktober.

In 2022, highest trips count occur on April.

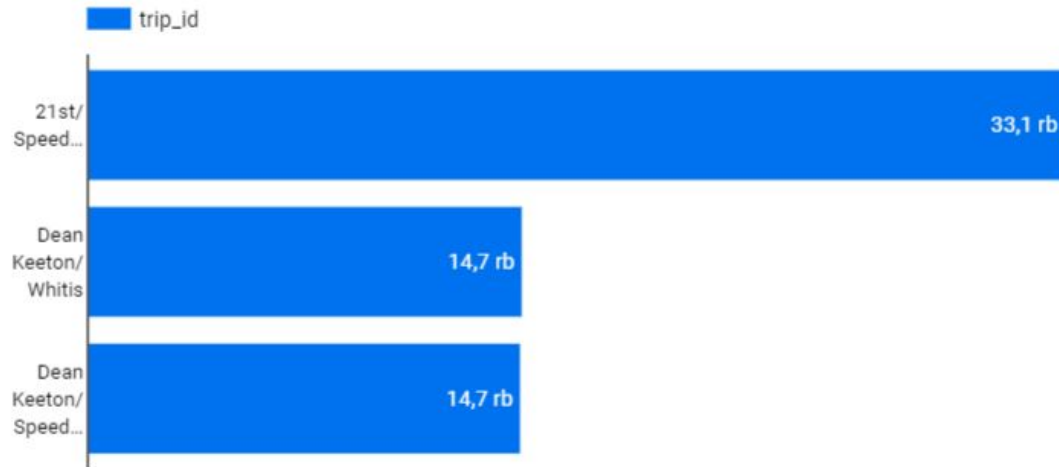
Although on these month occur the highest trips count, but the average trip duration (minute) did not.

Our highest trips count that occur on Oktober 2021 and April 2022 were contributed by our Student Membership users.

Despite having the most trips count, our Student Membership users are among the lowest average trip duration (just about 17 minutes)



## Top3 Visited Bike Stations



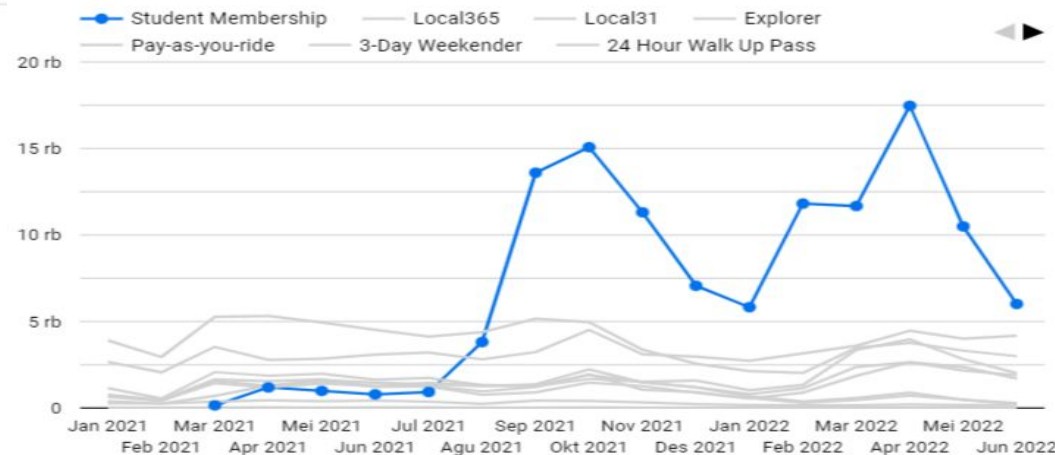
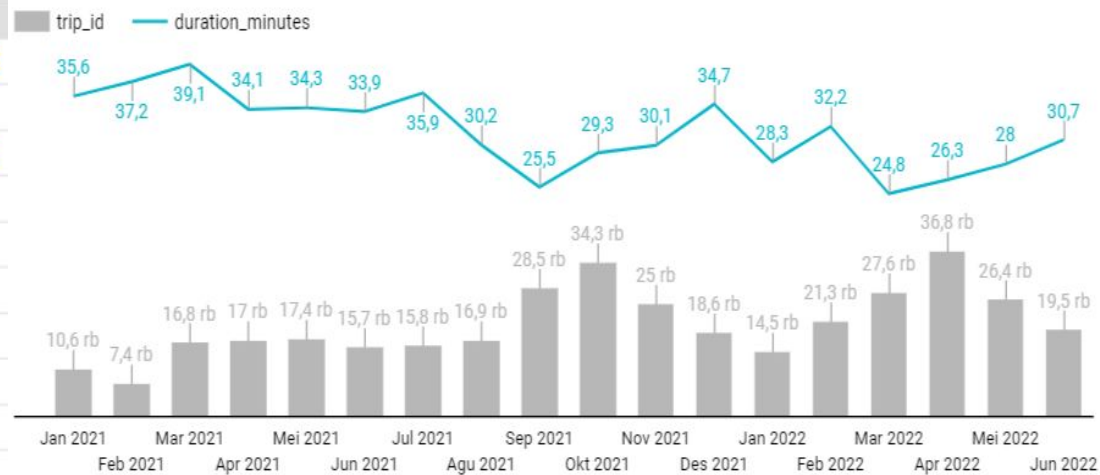
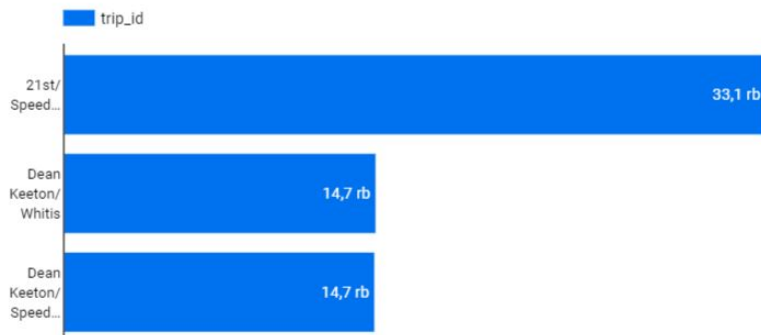
**21st/Speedway @ PCL, Dean Keeton/Whitis, Dean Keeton/Speedway are top3 visited bike stations.**



# Austin Bikeshare Analysis

subscriber_type	trip_id ▾	duration_minutes
Student Membership	118,2 rb	2 jt
Local365	69,2 rb	1,6 jt
Local31	59 rb	2 jt
Explorer	30,7 rb	1,3 jt
Pay-as-you-ride	27 rb	1,3 jt
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<b>Total keseluruhan</b>	<b>370 rb</b>	<b>11,3 jt</b>

## Top3 Visited Bike Stations



# Conclusion

Based on the problems that arise and based on the results of the data that has been processed, we know that

1. Throughout Jan 2021 - Jun 2022, most of our trips came from the Student Membership users but Local365, Local31, Explorer, Pay-as-you-ride, and 24 Hour Walk Up Pass membership are still worth to be focused on our campaign.
2. Highest trips count occur on October 2021 and April 2022. Although on these month occur the highest trips count, but the average trip duration (minute) did not. This is because in these month our Student Membership users having the most trips count but having lowest trip duration.
3. 21st/Speedway @ PCL, Dean Keeton/Whitis, Dean Keeton/Speedway are top3 visited bike stations.



# Thank You

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