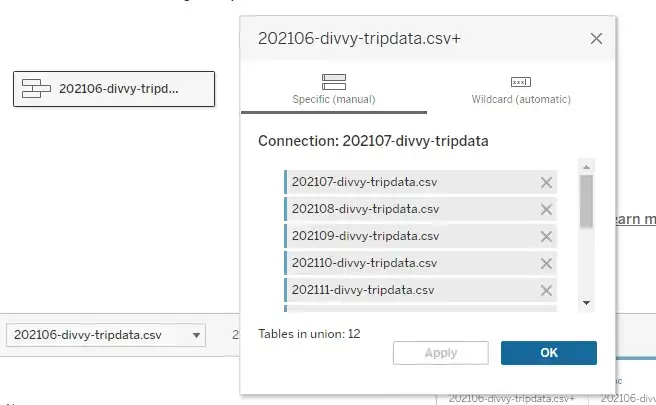
**Process**

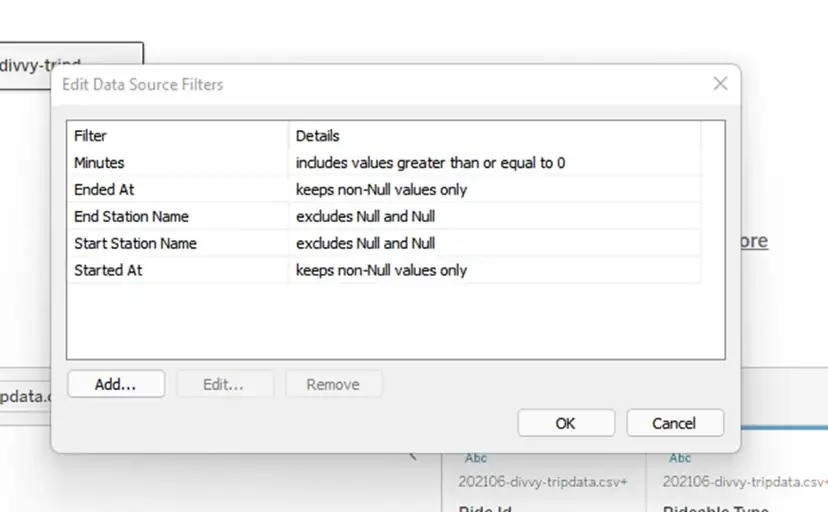
For this case study, I will be using Tableau because I want to explore the new features I recently came across. Also, Tableau Public allows for data source filtering, analysis, and visualization.

**The Cleaning Process**

* I appended all the datasets using the Union feature in Tableau.



* I applied data source filtering to exclude null values in the start and end station columns. I also excluded ride durations that were less than zero.

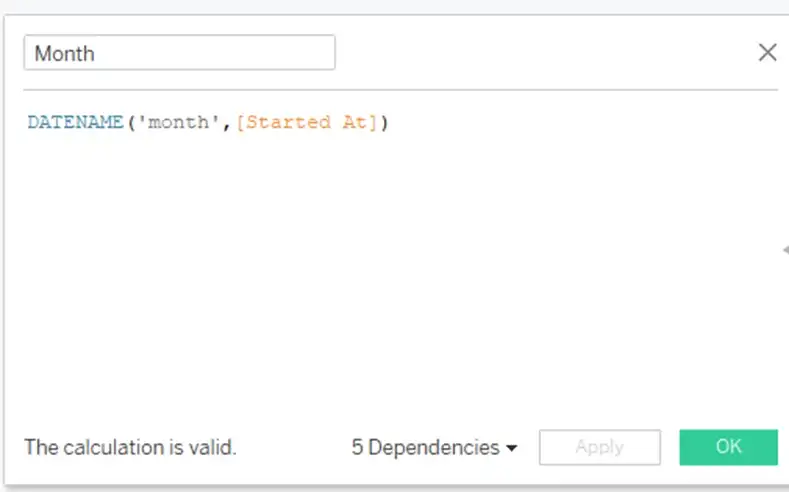


**Columns where the data source filtering was applied.**

After cleaning using data source filtering, the dataset was reduced to 4, 678, 762 rows.

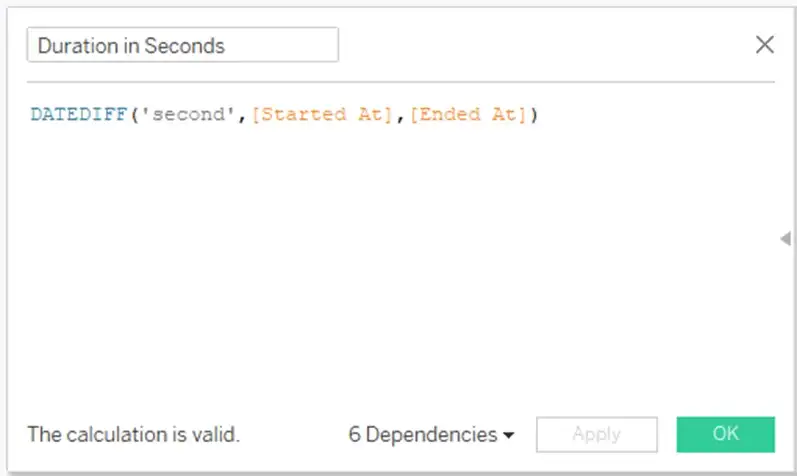
In other to provide the required insight, I observed that I needed some information that will help reduce the granularity of the date-time column. For this purpose, I created new columns.

* Using the DATENAME() function, I was able to extract month, weekday, and hour from the ‘Started At’ column

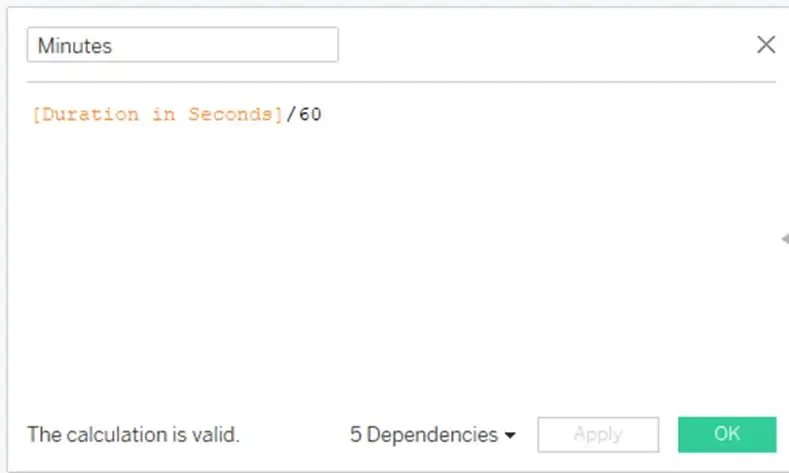


**In place of the ‘month’, I used ‘weekday’ to extract the Weekdays and ‘hour’ for the Hours.**

* I also used the DATEIFF() function to derive the ‘ride duration’ in seconds (that is, the time taken per ride).



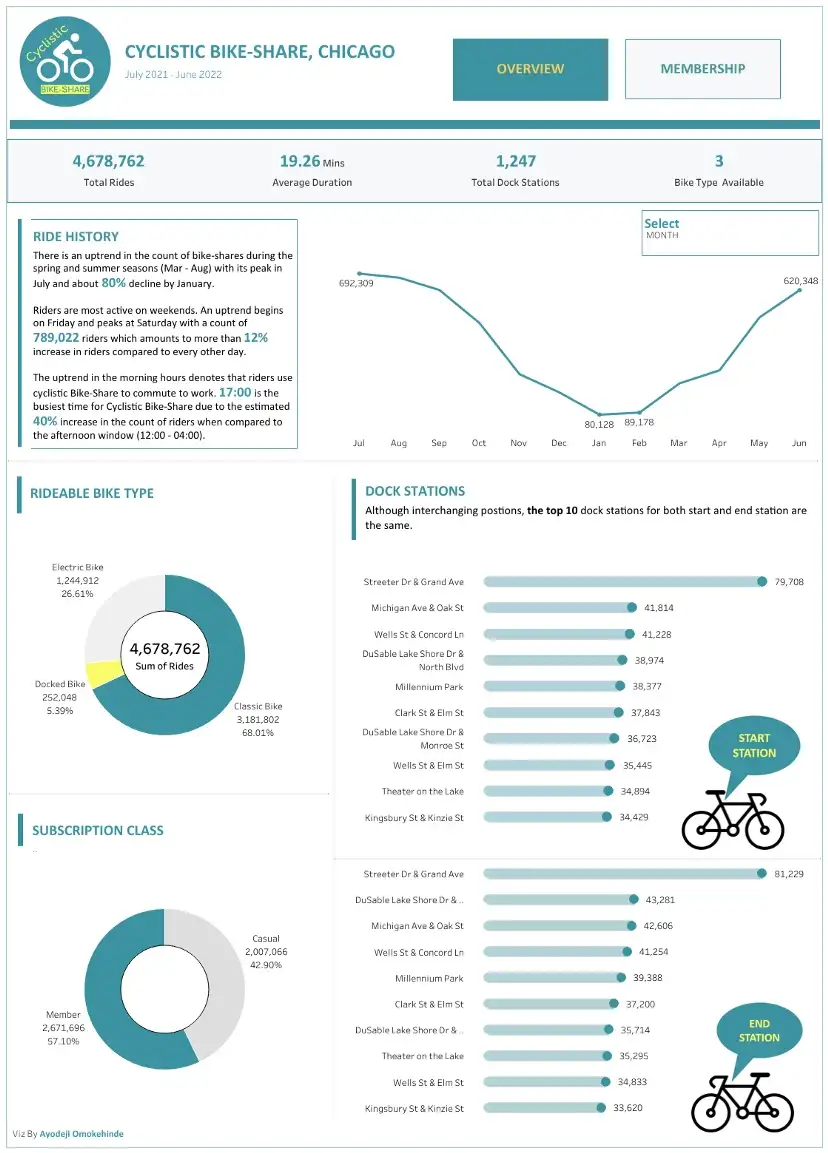
I could have just used ‘minute’ since that was what I needed, but I wanted to play around Calculated field’s valid syntaxes hence the long route.



Now the data is clean and ready to be analyzed.

# ****Analyze and Share****

I wanted to observe the riders’ behaviour as a whole and also help stakeholders see the performance of Cylistic riders and their preferences, so, I created an Overview Dashboard.



**Taking a sneak peek into the ‘RIDE HISTORY’**

* I observed an uptrend in the count of bike shares during the spring and summer seasons (Mar — Aug) with its peak in July and about**an 80%** decline by January.
* Riders are most active on weekends. An uptrend begins on Friday and peaks on Saturday with a count of **789,022** riders which amounts to more than a **12%** increase in riders compared to every other day.
* The uptrend in the morning hours denotes that riders use Cyclistic Bike-Share to commute to work. **17:00**is the busiest time for Cyclistic Bike-Share due to an approximately **40%** increase in the count of riders when compared to the afternoon window (12:00–04:00).

**Rideable Bike Type**

Classic Bikes are the most popular amongst all subscription class riders. About **68%** of bike riders use Classic Bikes. Dock Bikes are the least explored, measly pulling about **5%** of riders.

**Subscription Class**

Cyclistic Bike-Share Chicago has more member riders (about 57%) than casual riders (about 43%) when divided into subscription classes.

**Dock Stations**

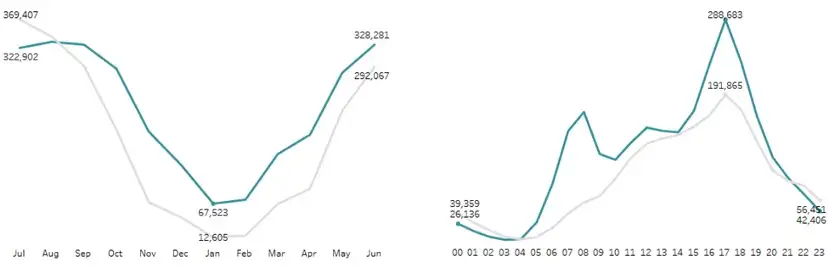
Although interchanging positions, **the top 10** dock stations for both start and end stations are the same. Streeter Dr & Grand Ave tops both lists with a count of **79.7K**and**81.2K** riders respectively.

# ****DIVING RIGHT INTO HOW RIDERS BEHAVE DIFFERENTLY****

The riders have been divided into subscription classes. Customers who purchase single-ride or full-day passes are referred to as **Casual Riders**. Customers who purchase annual memberships are **Member Riders**.

**Ride History: Month**

Casual riders had their highest count of bike shares in **July**while member riders had theirs in **August**. Both subscription classes experienced downtimes in January and February.



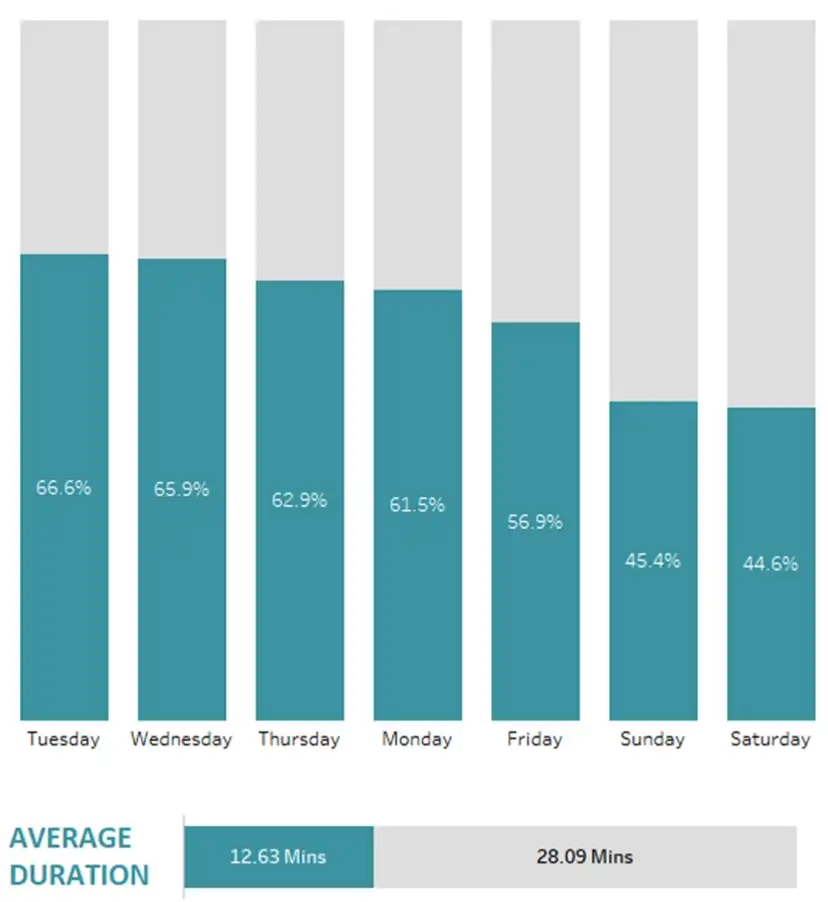
**Ride History: Hour**

There is an increase in bike-sharing during the hours of **15:00**to **19:00**. Both member and casual riders had their peaks at **17:00**. Casual Riders are more active from **21:00**to **04:00**, these points act as swap points.

**Ride History: Weekdays**

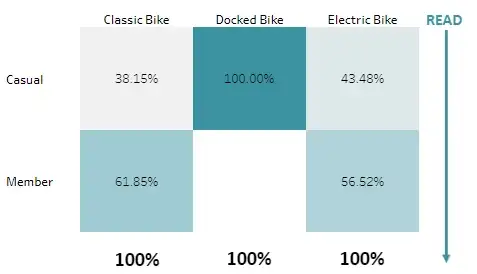
Member Riders top the chart during weekdays, **Tuesday** being their highest. A flip in numbers starts on Friday with casual riders having their highest on **Saturday.**

The average duration (time spent per trip) of member riders is about **44%** of the casual riders.



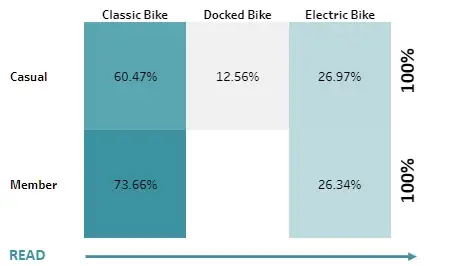
**Rideable Bike Type By Subscription Class**

Member Riders have more dominance in the use of Classic and Electric Bikes, they make up more than **55%** of Classic and Electric Bikes users respectively. Only casual riders use Docked Bikes.



**Subscription Class By Rideable Bike Type**

**74%** of member riders use Classic Bikes leaving Electric Bikes with **26%.**About**13%**of casual riders use Docked Bikes leaving about **60%** and**27%** to Classic and Electric Bikes respectively.



The link to the dashboard is [***here***](https://public.tableau.com/app/profile/piyush.kumar4684/viz/Cyclistictripdata_16687539328780/Membership).

# Act

Here are some insights garnered from analyzing the Cyclistic data and corresponding recommendations that will be useful for the marketing campaign:

* Approximately **60%**of the casual riders use Classic Bikes for travelling, so, in other to increase the conversion of casual riders to member riders, we can offer special incentives for the use of Classic Bikes for some time as a ‘welcome package’ for new member riders.
* Casual riders tend to ride more on weekends, so, a special subscription offer inclusive of a **10%**price slash voucher for any casual rider that wants to become a member rider can be given to casual riders to try out weekday cycling.
* Since 5 pm is a staple ‘rush-hour’ time, ‘Member priority’ should be put in place. This will give casual riders a reason to consider conversion.
* Casual riders may prefer the ease of having to pay per trip, so the option of breaking the ‘Membership Plan’ into monthly, quarterly and yearly should be considered.
* The market campaigns with the use of Digital Screens for Cylistic advertisements in the top 4 stations, which is: Streeter Dr & Grand Avenue, Michigan Ave & Oak Street, Wells St & Concord Ln and DuSable Lake Shore Dr & North Blvd should be considered.
* The social media platforms should be leveraged through campaigns that cover how casual riders can save money by becoming member riders.
* Campaigns should be all year round but heavy during Winter and Autumn in other to gain good conversion before Spring and Summer.

Some additional data such as information about riders’ age, gender, address, profession, income, and interests will help expand the insights gotten which will in turn reflect on the recommendations given.