

Track 1 Bikes Case Study- November

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Cyclistic Bike Data

November

```
Nov <- read_csv("202111-divvy-tripdata.csv")
Nov <- Nov %>%
  mutate(trip_duration11 = as.duration(ended_at - started_at))
Nov_filtered <- Nov %>%
  select(ride_id, rideable_type, started_at, ended_at, member_casual,
  trip_duration11) %>%
  filter(trip_duration11 > 5)
```

In November, there were 359165 trips.

Trips

```
Nov_members <- Nov_filtered %>%
  filter(member_casual == "member")
Nov_casual <- Nov_filtered %>%
  filter(member_casual == "casual")
```

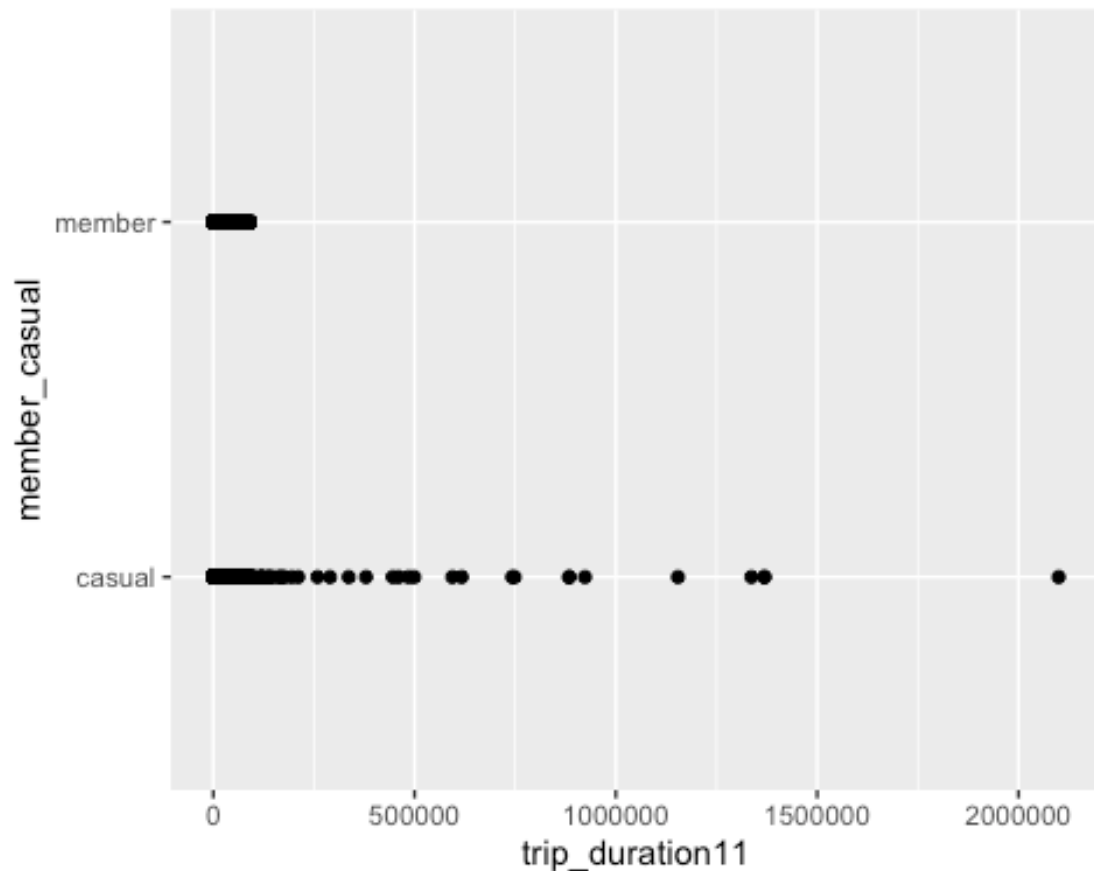
In November, 106743 trips were by casual users and 252422 were by annual members.

Trip Length

```
Nov_trip_avg <- (mean(Nov_filtered$trip_duration11))
Nov_m_trip_avg <- (mean(Nov_members$trip_duration11))
Nov_c_trip_avg <- (mean(Nov_casual$trip_duration11))
```

The average trip in November was 891 seconds (14.9 minutes). For casual riders, the average ride was 1389 seconds (23 minutes). For members, the average ride was 680 seconds (11 minutes).

```
ggplot(data = Nov_filtered, aes(x = trip_duration11, y = member_casual)) +
  geom_point()
```



Max Trip and Min Trip

Before filtering, the shortest trip by members was -3245 seconds.

For casual riders, the shortest trip was -3482 seconds.

The longest trip for members was 89997 seconds. The longest trip for casual riders is 2099863 seconds about 3.47 weeks.

```
Nov_c_trip_max <- (max(Nov_casual$trip_duration11))
Nov_m_trip_max <- (max(Nov_members$trip_duration11))
Nov_c_trip_min <- (min(Nov_casual$trip_duration11))
Nov_m_trip_min <- (min(Nov_members$trip_duration11))
```

Bike Type

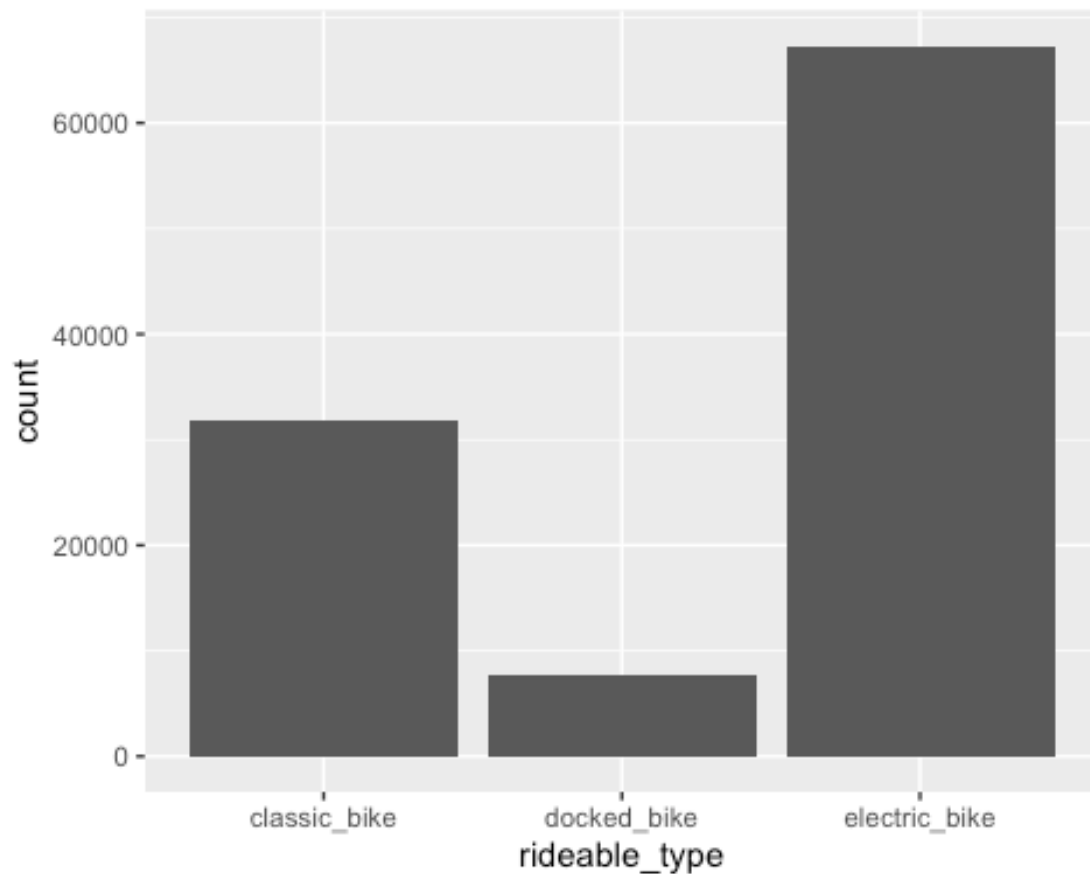
```
Nov_c_elec <- length(which(Nov_casual$rideable_type == "electric_bike"))
Nov_c_classic <- length(which(Nov_casual$rideable_type == "classic_bike"))
Nov_c_docked <- length(which(Nov_casual$rideable_type == "docked_bike"))
```

Casual riders took 31812 trips on classic bikes, 67333 trips on electric bikes, and 7598 trips on docked bikes.

```
Nov_m_elec <- length(which(Nov_members$rideable_type == "electric_bike"))
Nov_m_classic <- length(which(Nov_members$rideable_type == "classic_bike"))
Nov_m_docked <- length(which(Nov_members$rideable_type == "docked_bike"))
```

Annual members took 121851 trips on classic bikes, 130571 on electric bikes, and 0 on docked bikes.

```
ggplot(data = Nov_casual, aes(x = rideable_type)) +  
  geom_bar()
```



```
ggplot(data = Nov_members, aes(x = rideable_type)) +  
  geom_bar()
```

