

Track 1 Bikes Case Study- August

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January 25, 2022 - January 27, 2022

Cyclistic Bike Data

August

```
Aug <- read_csv("202108-divvy-tripdata.csv")
Aug <- Aug %>%
  mutate(Aug, trip_duration8 = as.duration(ended_at - started_at))
Aug_filtered <- Aug %>%
  select(ride_id, rideable_type, started_at, ended_at, member_casual,
trip_duration8) %>%
  filter(trip_duration8 > 5)
```

Trips

```
Aug_members <- Aug_filtered %>%
  filter(member_casual == "member")
Aug_casual <- Aug_filtered %>%
  filter(member_casual == "casual")
```

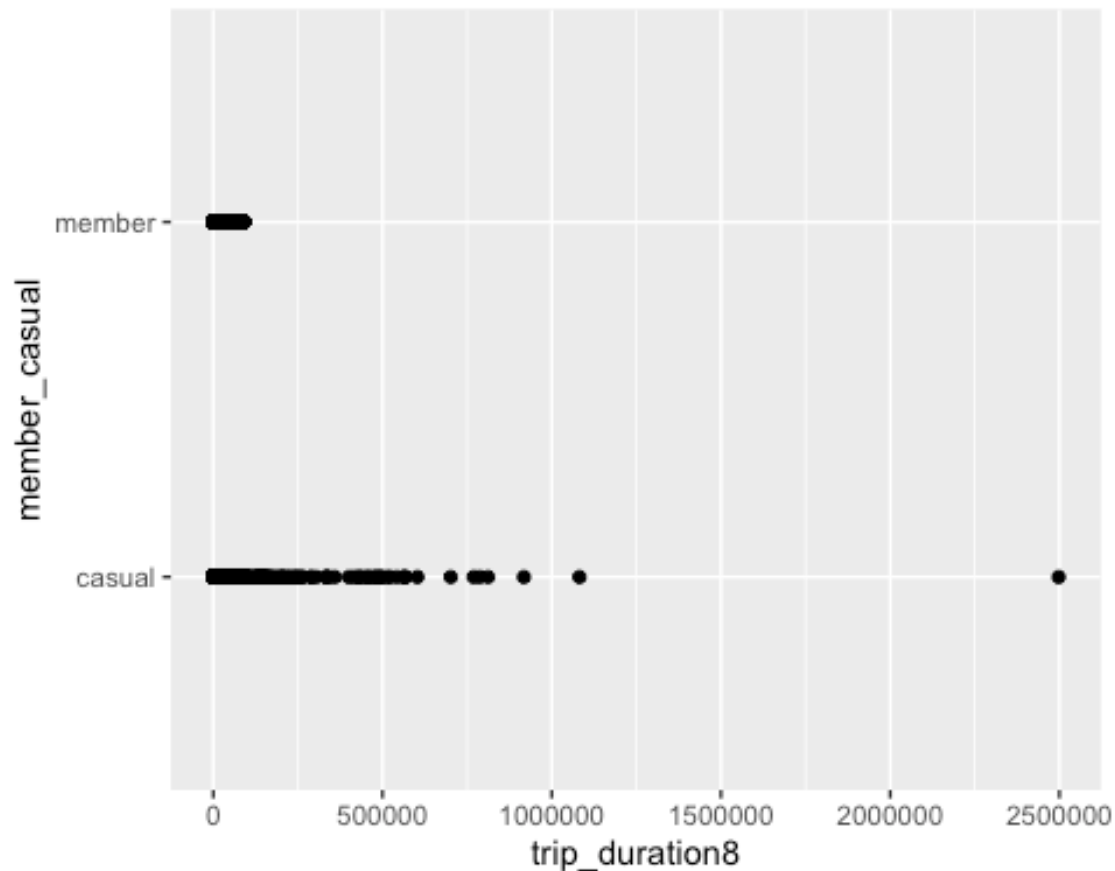
In August, we have 802700 trips. 412068 trips were by casual users and 390632 were by annual members.

Trip Length

```
Aug_trip_avg <- (mean(Aug_filtered$trip_duration8))
Aug_m_trip_avg <- (mean(Aug_members$trip_duration8))
Aug_c_trip_avg <- (mean(Aug_casual$trip_duration8))
```

The average trip in August was 1300 seconds (21 minutes). For casual riders, the average ride was 1729 seconds (28 minutes). For members, the average ride was 848 seconds (14 minutes).

```
ggplot(data = Aug_filtered, aes(x = trip_duration8, y = member_casual)) +
  geom_point()
```



Max Trip and Min Trip

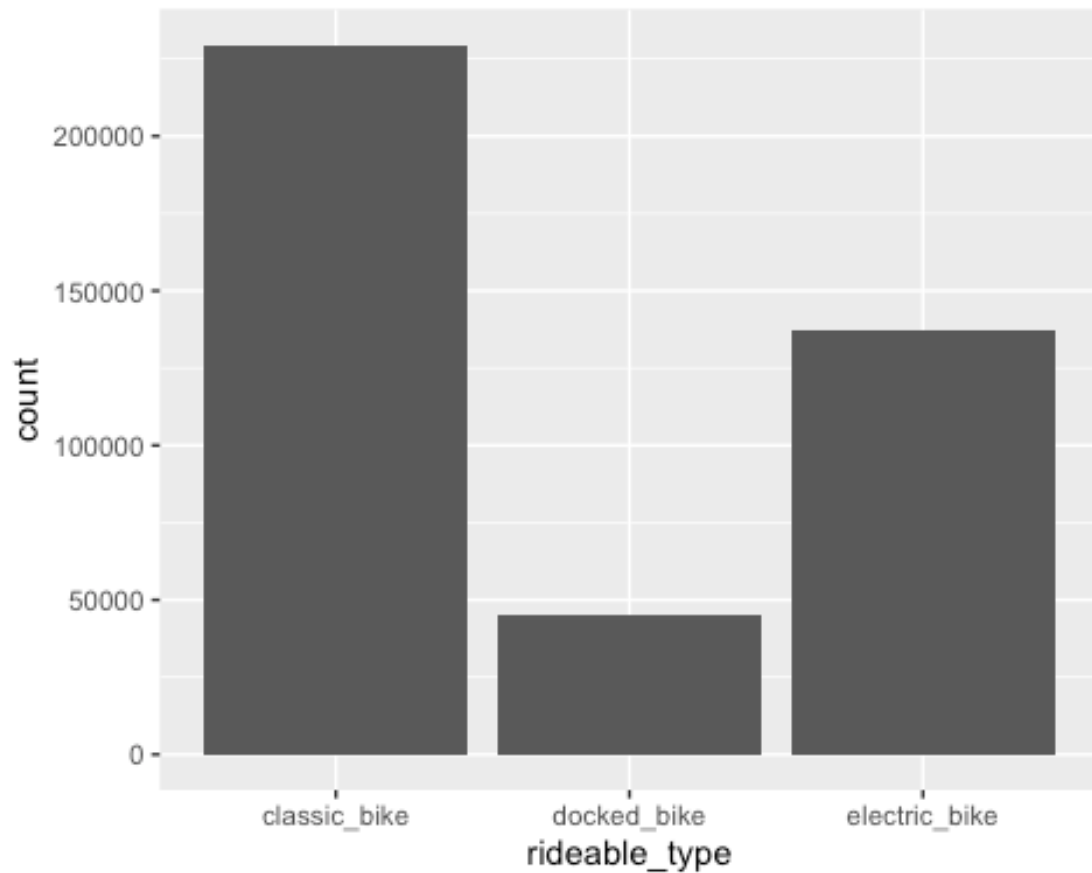
Before filtering, the shortest trip by members was -67 seconds. Following are trips of -160, -72, -45, -36, -28, -22, -19, -14, -14, -13, -13, -12, -11, -8, -7, -6, -5, -5, -1. For casual riders, the shortest trip was -107 seconds. Following are trips of -70, -63, -58, -37, -23, -21, -19, -3.

The longest trip for members was 89997 seconds. The longest trip for casual riders is 2497750 seconds, or 4.13 weeks.

```
Aug_c_trip_max <- (max(Aug_casual$trip_duration8))
Aug_m_trip_max <- (max(Aug_members$trip_duration8))
Aug_c_trip_min <- (min(Aug_casual$trip_duration8))
Aug_m_trip_min <- (min(Aug_members$trip_duration8))
```

Bike Type

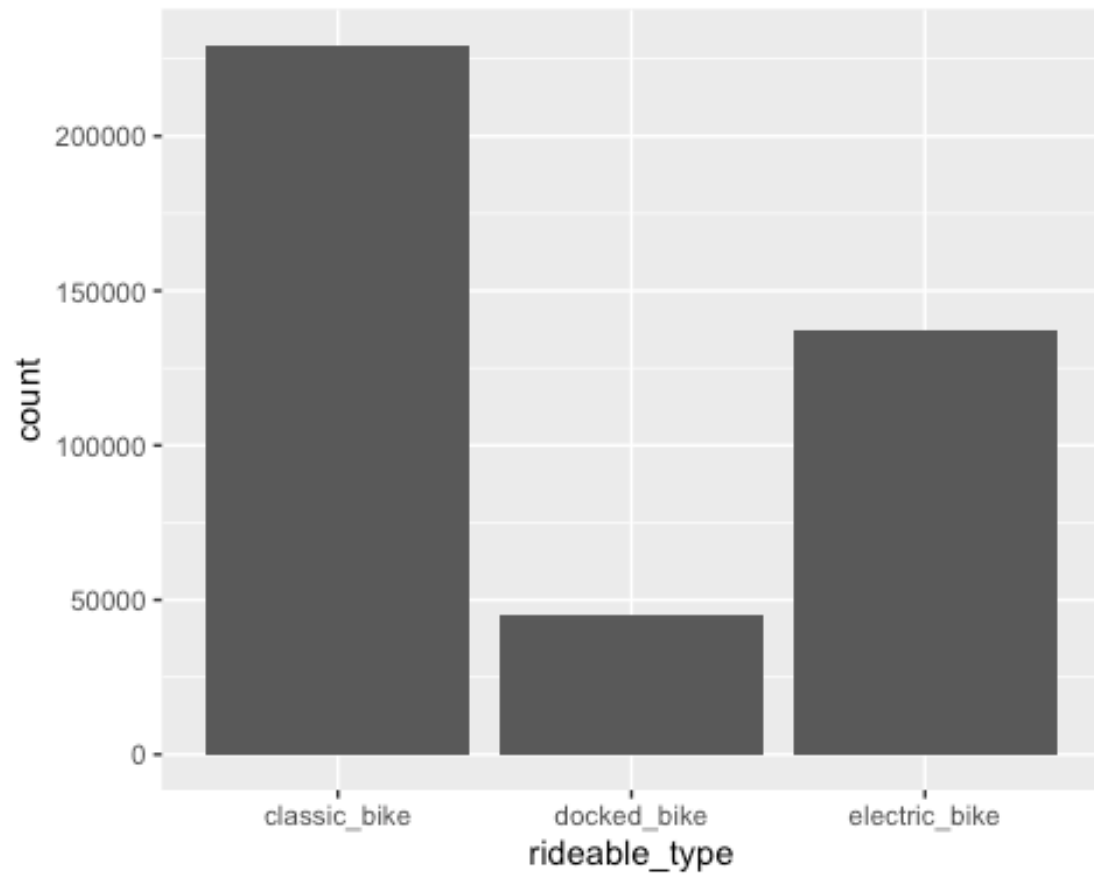
```
Aug_c_elec <- length(which(Aug_casual$rideable_type == "electric_bike"))
Aug_c_classic <- length(which(Aug_casual$rideable_type == "classic_bike"))
Aug_c_docked <- length(which(Aug_casual$rideable_type == "docked_bike"))
ggplot(data = Aug_casual, aes(x = rideable_type)) +
  geom_bar()
```



Casual

members took 229645 trips on classic bikes, 137410 trips on electric bikes, and 45013 trips on docked bikes.

```
Aug_m_elec <- length(which(Aug_members$rideable_type == "electric_bike"))
Aug_m_classic <- length(which(Aug_members$rideable_type == "classic_bike"))
Aug_m_docked <- length(which(Aug_members$rideable_type == "docked_bike"))
ggplot(data = Aug_casual, aes(x = rideable_type)) +
  geom_bar()
```



Annual members took 272234 trips on classic bikes, 118398 trips on electric bikes, and none on docked bikes.