Track 1 Bikes Case Study- December

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January 25, 2022 - January 27, 2022

Cyclistic Bike Data

December

```
Dec <- read_csv("202112-divvy-tripdata.csv")
Dec <- Dec %>%
  mutate(Dec, trip_duration12 = as.duration(ended_at - started_at))
Dec_filtered <- Dec %>%
    select(ride_id, rideable_type, started_at, ended_at, member_casual,
trip_duration12) %>%
    filter(trip_duration12 > 5)
```

In December, there were 247028 trips.

```
Dec_members <- Dec_filtered %>%
    filter(member_casual == "member")
Dec_casual <- Dec_filtered %>%
    filter(member_casual == "casual")
```

In December, 69641 trips by casual users, and 177387 trips by annual members.

Trip Length

```
Dec_trip_avg <- (mean(Dec_filtered$trip_duration12))
Dec_m_trip_avg <- (mean(Dec_members$trip_duration12))
Dec_c_trip_avg <- (mean(Dec_casual$trip_duration12))
```

The average trip length in December was 873 seconds (14 minutes) . For members, the average trip length was 661 seconds (11 minutes). For casual members we see the average trip is 1411 seconds (23 minutes).

```
ggplot(data = Dec_filtered, aes(x = trip_duration12, y = member_casual)) +
    geom_point()
```
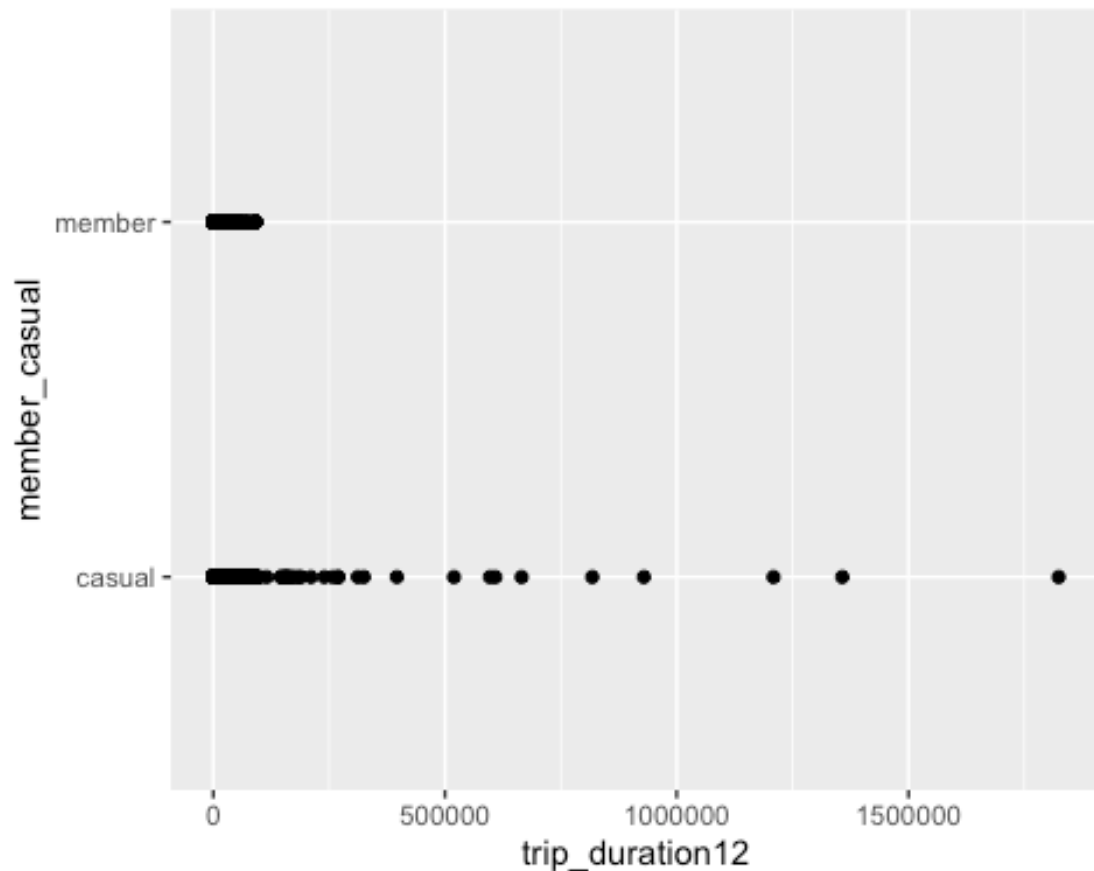
Max and Min

Before filtering, the shortest trip for annual members was 0 seconds. For casual users, the shortest trip was of 0 seconds.

The longest trip for members was 89997 seconds, or just over a day. For casual riders, the longest trip was 1824033 seconds, or 3.02 weeks.

```
Dec_c_trip_max <- (max(Dec_casual$trip_duration12))
Dec_m_trip_max <- (max(Dec_members$trip_duration12))
Dec_c_trip_min <- (min(Dec_casual$trip_duration12))
Dec_m_trip_min <- (min(Dec_members$trip_duration12))
```

Bike Type
```
Dec_c_elec <- length(which(Dec_casual$rideable_type == "electric_bike"))
Dec_c_classic <- length(which(Dec_casual$rideable_type == "classic_bike"))
Dec_c_docked <- length(which(Dec_casual$rideable_type == "docked_bike"))
ggplot(data = Dec_casual, aes(x = rideable_type)) +
    geom_bar()
```
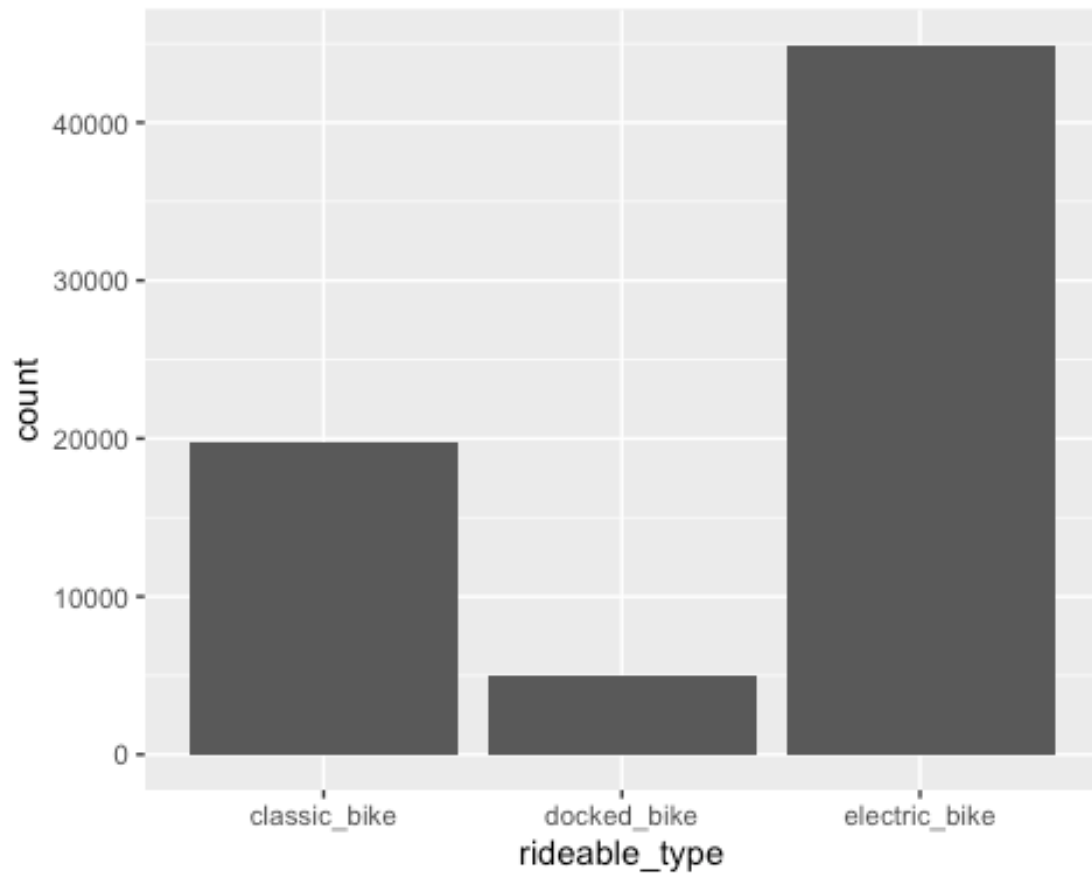
Casual riders took 19786 trips on classic bikes, 4918 trips on docked bikes, and 44937 trips on electric bikes.

```
Dec_m_elec <- length(which(Dec_members$rideable_type == "electric_bike"))
Dec_m_classic <- length(which(Dec_members$rideable_type == "classic_bike"))
Dec_m_docked <- length(which(Dec_members$rideable_type == "docked_bike"))
ggplot(data = Dec_casual, aes(x = rideable_type)) +
     geom_bar()
```
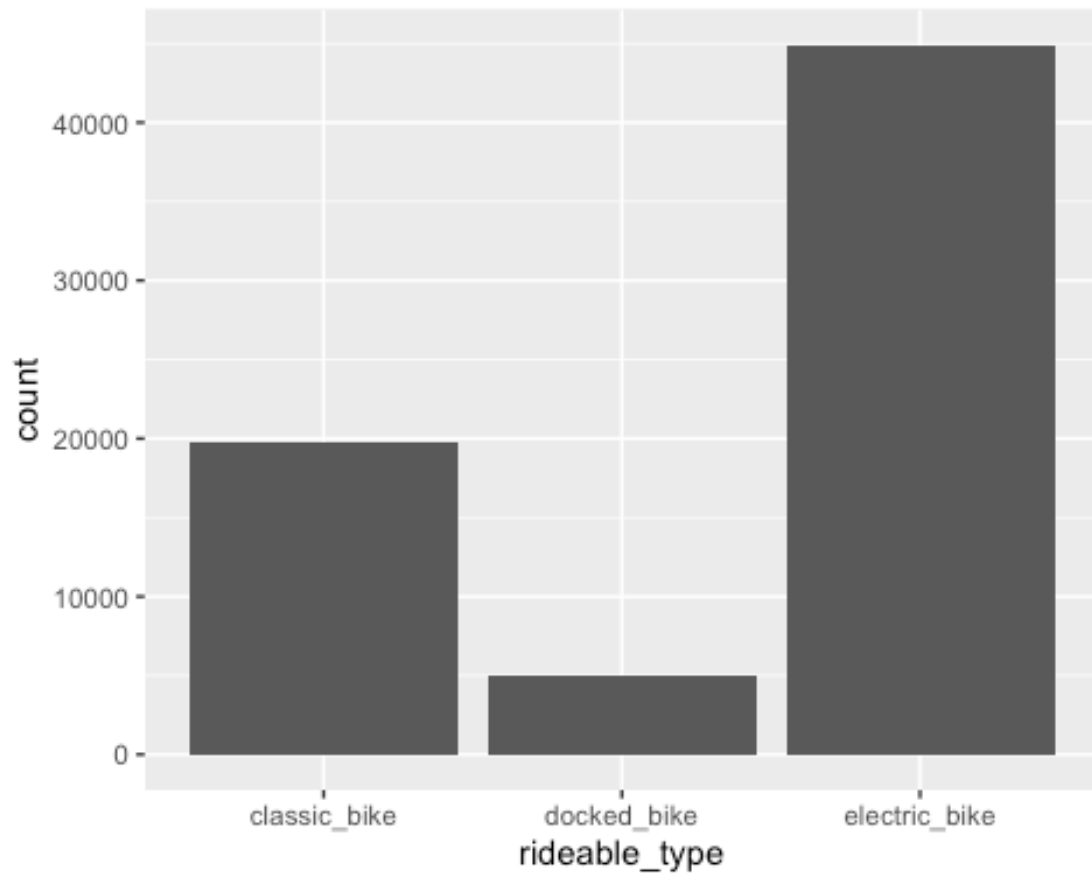
Annual members took 80650 trips on classic bikes, 96737 trips on electric bikes, and none on docked bikes.