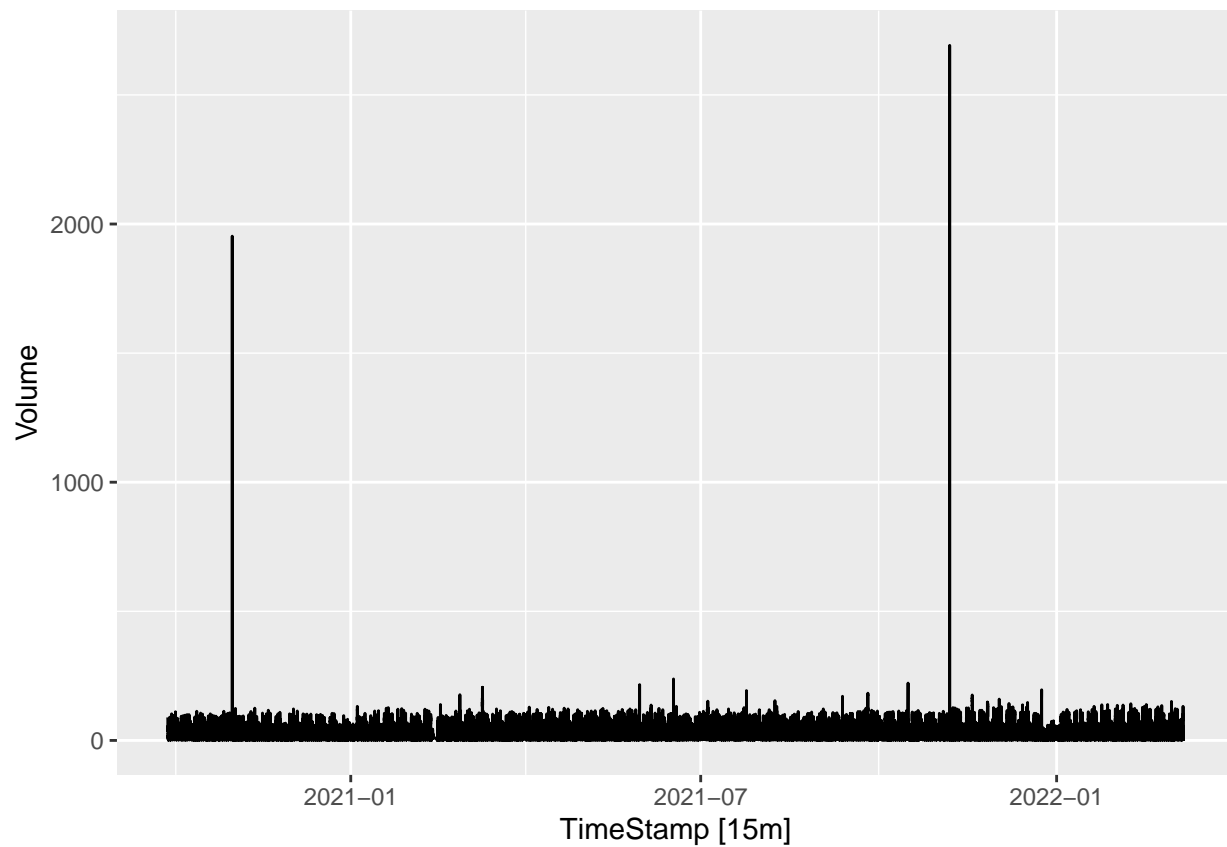# Final Project Part 2

3/26/2022

Here is what the dataset looks like.

```
## # A tsibble: 2,249,353 x 5 [15m] <?>
## # Key:       TSSU, Phase [52]
##     Volume Travel_Time TSSU  Phase TimeStamp
##      <dbl>       <dbl> <chr> <int> <dttm>
## 1     105        1.23 01017     2 2020-09-28 10:00:00
## 2     111        1.25 01017     2 2020-09-28 10:15:00
## 3     105        1.32 01017     2 2020-09-28 10:30:00
## 4     102        1.18 01017     2 2020-09-28 10:45:00
## 5      87        1.17 01017     2 2020-09-28 11:00:00
## 6      68        1.08 01017     2 2020-09-28 11:15:00
## 7      49        1.1  01017     2 2020-09-28 11:30:00
## 8      69        1.1  01017     2 2020-09-28 11:45:00
## 9      44        1.03 01017     2 2020-09-28 12:00:00
## 10     55        1.03 01017     2 2020-09-28 12:15:00
## # ... with 2,249,343 more rows
```

There are anomalies which sometimes occur during daylight savings time changes due to an unresolved software bug. Those datapoints can be removed.

Time Series Decomposition Example

STL decomposition

`Hourly Volume (Vehicles Per Hour)` = trend + season_week + season_day + remainder