TABLEAU PROJECT REPORT

LONDON BICYCLE RIDES

DATE 30 July 2024

SUBMITTED TO : RAHUL GURNANI

SUBMITTED BY : Naresh Kumar

PROJECT OVERVIEW

Project Overview Data Source and Collection Data Origin:
Downloaded from Kaggle, collected from a government site.

Dataset Details: 17,414 rows and 10 columns.

Data Preparation and Cleaning Tools Used: Python Process: Data cleaning to ensure accuracy and consistency.

Data Analysis and Visualization Platform: Tableau Focus Areas: Temperature (t1 - actual, t2 - feels like)Bike ridership count (cnt)Weather conditions (weather_code)Wind speed (wind_speed)Temporal factors (holidays, weekends, seasons)

Dashboard Insights Objective: Analyze bike ridership patterns across London.

Key Visualization: Number of riders during specific time periods and weather conditions.

jupyter tableau_project1 Last Checkpoint: Last Friday at 10:57 PM (autosaved) Logout

File Edit View Insert Cell Kernel Widgets Help Not Trusted Python 3 (ipykernel)

Run Code

In [2]:
```
import pandas as pd
import numpy as np
```

In [3]:
```
file_path='london_merged.csv'
df=pd.read_csv(file_path)
```

UNCLEANED DATA

In [4]:
```
df.head(5)
```

Out[4]:

	timestamp	cnt	t1	t2	hum	wind_speed	weather_code	is_holiday	is_weekend	season
0	2015-01-04 00:00:00	182	3.0	2.0	93.0	6.0	3.0	0.0	1.0	3.0
1	2015-01-04 01:00:00	138	3.0	2.5	93.0	5.0	1.0	0.0	1.0	3.0
2	2015-01-04 02:00:00	134	2.5	2.5	96.5	0.0	1.0	0.0	1.0	3.0
3	2015-01-04 03:00:00	72	2.0	2.0	100.0	0.0	1.0	0.0	1.0	3.0
4	2015-01-04 04:00:00	47	2.0	0.0	93.0	6.5	1.0	0.0	1.0	3.0

CLEANED DATA

In [16]:
```
df.head()
```

Out[16]:

	time	total_no	original_temp	temp_feels_like	humidity_percent	wind_speed_kph	weather	is_holiday	is_weekend	season
0	2015-01-04 00:00:00	182	3.0	2.0	0.930	6.0	Broken Clouds	0.0	1.0	winter
1	2015-01-04 01:00:00	138	3.0	2.5	0.930	5.0	Clear	0.0	1.0	winter
2	2015-01-04 02:00:00	134	2.5	2.5	0.965	0.0	Clear	0.0	1.0	winter
3	2015-01-04 03:00:00	72	2.0	2.0	1.000	0.0	Clear	0.0	1.0	winter
4	2015-01-04 04:00:00	47	2.0	0.0	0.930	6.5	Clear	0.0	1.0	winter

In [17]:
```
df.to_excel('London_bikes_data.xlsx',sheet_name='Data')
```

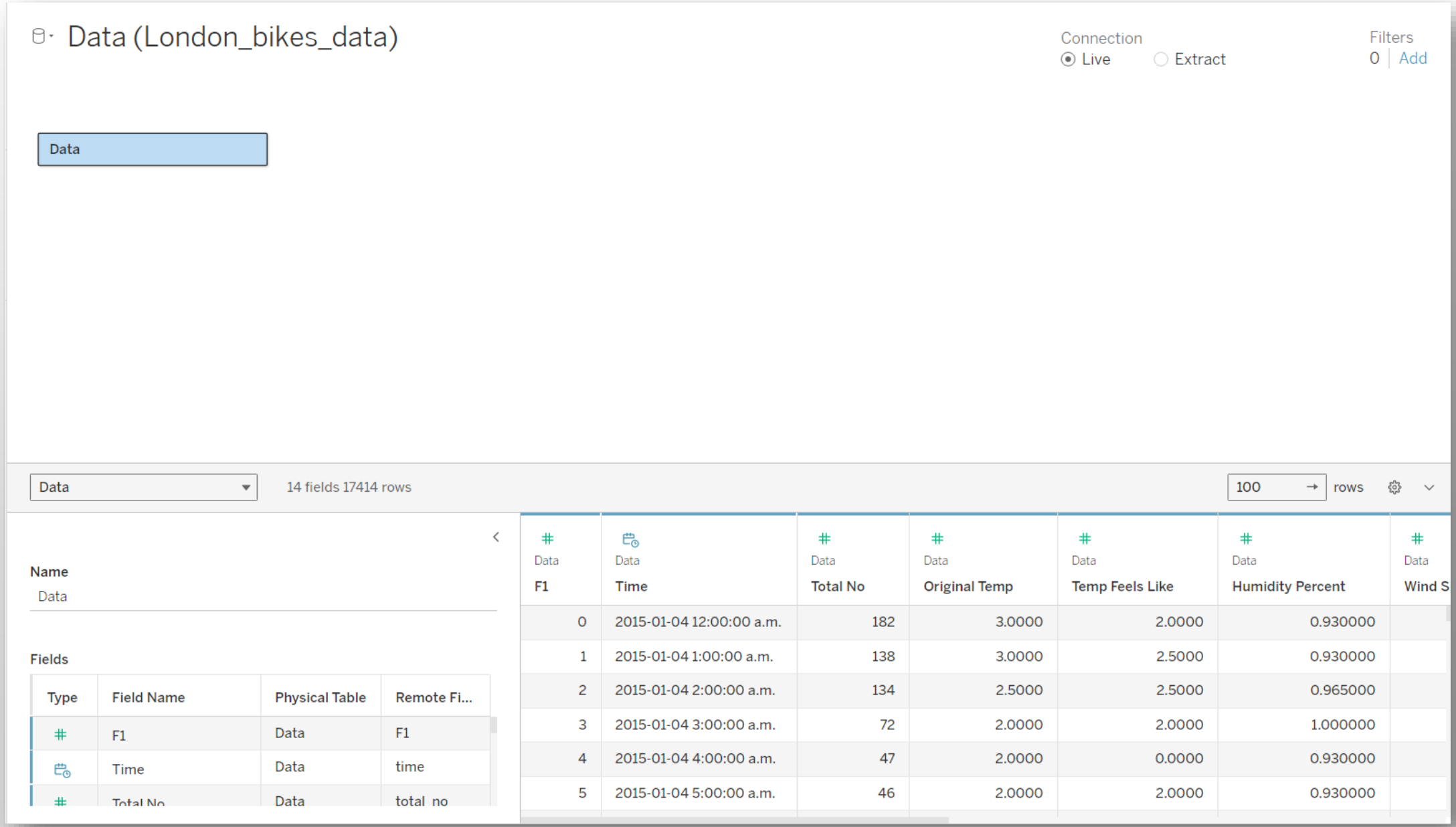
In [ ]:
```

```

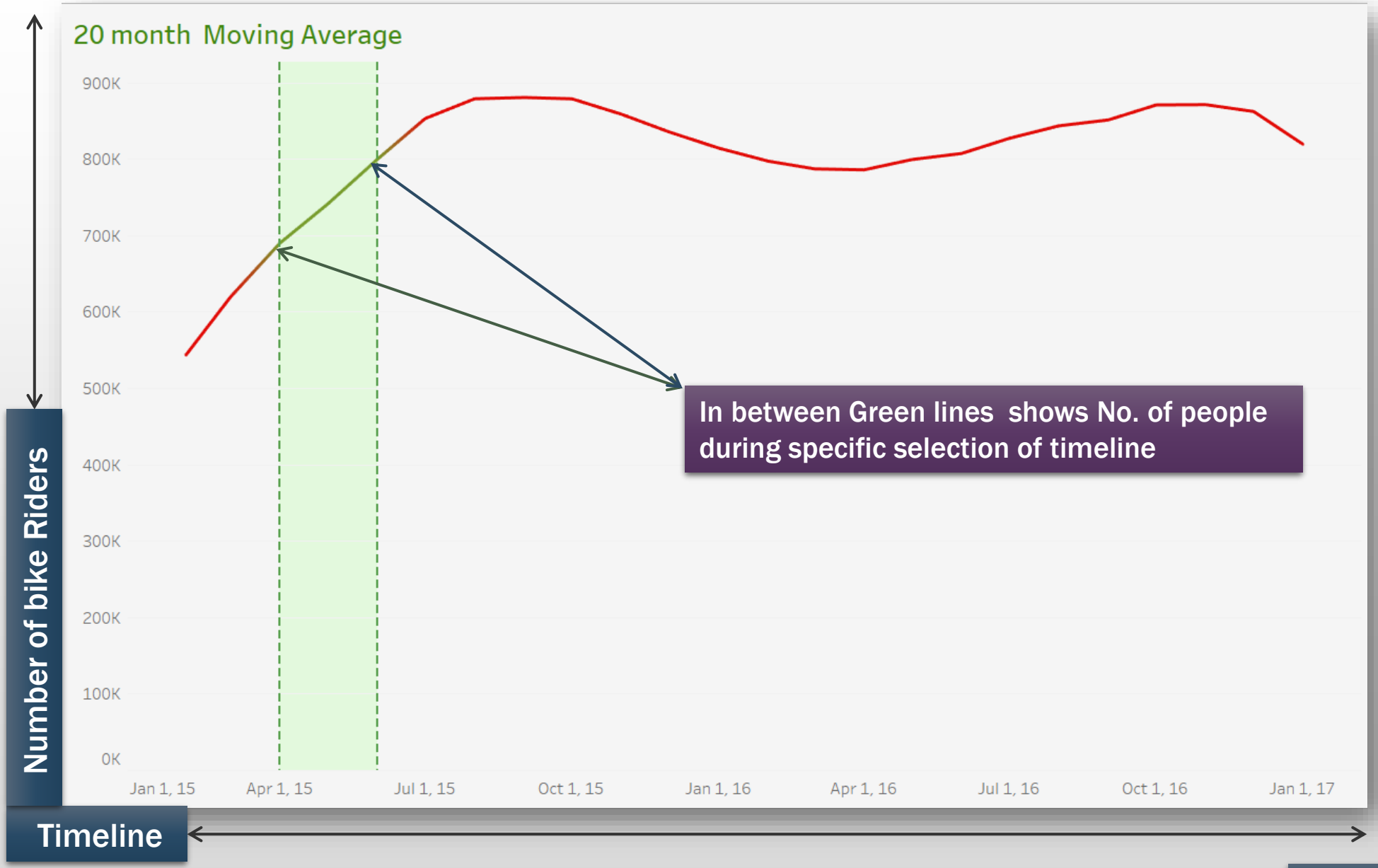
In [6]:
```
df.shape
```

Out[6]: (17414, 10)

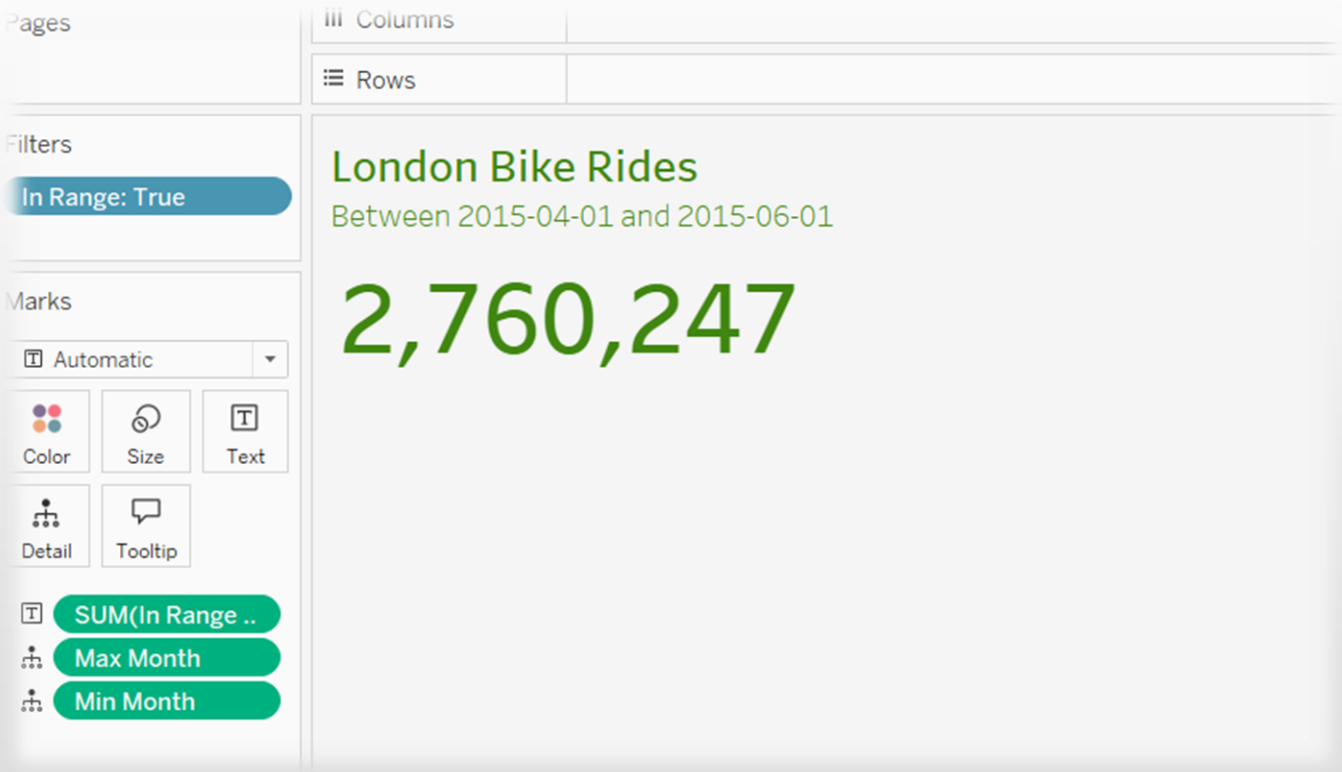
META DATA INFO

- "timestamp" - timestamp field for grouping the data
- "cnt" - the count of a new bike shares
- "t1" - real temperature in C
- "t2" - temperature in C "feels like"
- "hum" - humidity in percentage
- "wind_speed" - wind speed in km/h
- "weather_code" - category of the weather
- "is_holiday" - boolean field - 1 holiday / 0 non holiday
- "is_weekend" - boolean field - 1 if the day is weekend
- "season" - category field meteorological seasons: 0-spring ; 1-summer; 2-fall; 3-winter.
- "weathe_code" category description:
- 1 = Clear ; mostly clear but have some values with haze/fog/patches of fog/ fog in vicinity
- 2 = scattered clouds / few clouds
- 3 = Broken clouds 4 = Cloudy 7 = Rain/ light Rain shower/ Light rain 10 = rain with thunderstorm 26 = snowfall 94 = Freezing Fog

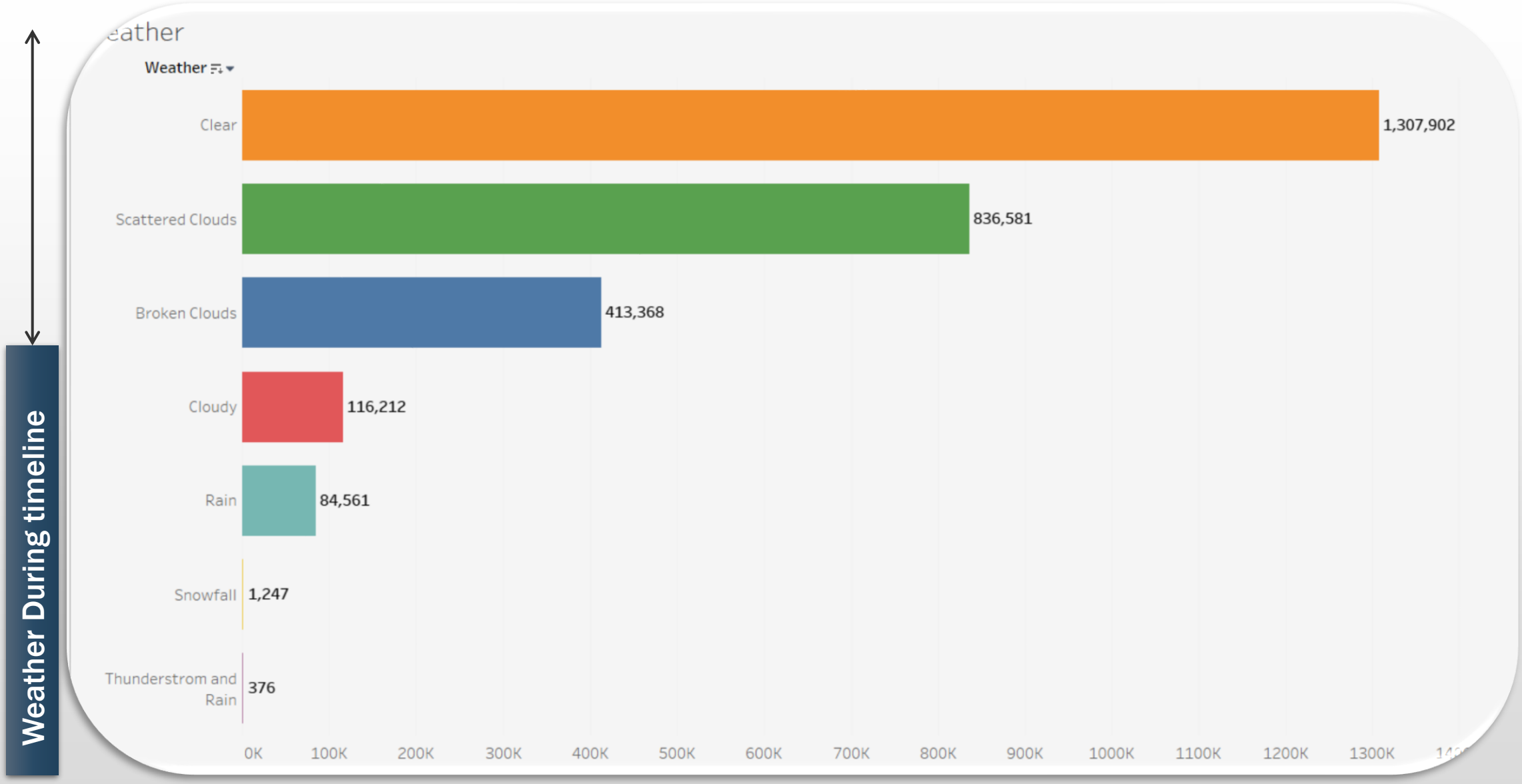

Data (London_bikes_data)
Connection
Live
Extract
Filters
0
Add
Data
Data
14 fields 17414 rows
100
rows
Name
Data
Fields
Type
Field Name
Physical Table
Remote Fi...
F1
Data
F1
Time
Data
time
Total No
Data
total_no
Data
F1
Data
Time
Data
Total No
Data
Original Temp
Data
Temp Feels Like
Data
Humidity Percent
Data
Wind S
0 2015-01-04 12:00:00 a.m. 182 3.0000 2.0000 0.930000
1 2015-01-04 1:00:00 a.m. 138 3.0000 2.5000 0.930000
2 2015-01-04 2:00:00 a.m. 134 2.5000 2.5000 0.965000
3 2015-01-04 3:00:00 a.m. 72 2.0000 2.0000 1.000000
4 2015-01-04 4:00:00 a.m. 47 2.0000 0.0000 0.930000
5 2015-01-04 5:00:00 a.m. 46 2.0000 2.0000 0.930000


20 month Moving Average
900K
800K
700K
600K
500K
400K
300K
200K
100K
0K
Jan 1, 15
Apr 1, 15
Jul 1, 15
Oct 1, 15
Jan 1, 16
Apr 1, 16
Jul 1, 16
Oct 1, 16
Jan 1, 17
In between Green lines shows No. of people during specific selection of timeline
Number of bike Riders
Timeline

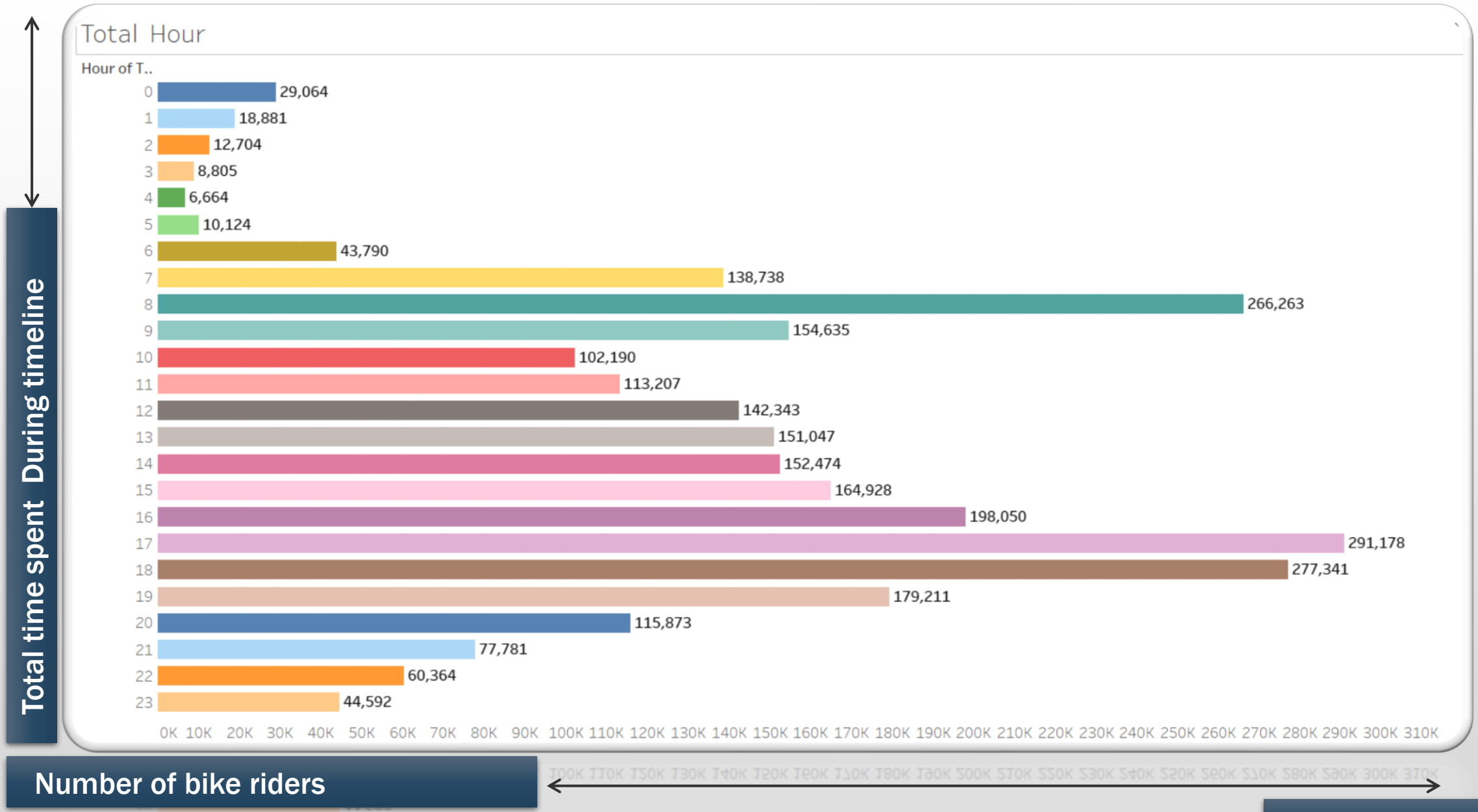
SHEET 1


Pages
Columns
Rows
Filters
In Range: True
Marks
Automatic
Color
Size
Text
Detail
Tooltip
SUM(In Range ..
Max Month
Min Month
London Bike Rides
Between 2015-04-01 and 2015-06-01
2,760,247

SHEET 2


eather
Weather
Clear
1,307,902
Scattered Clouds
836,581
Broken Clouds
413,368
Cloudy
116,212
Rain
84,561
Snowfall
1,247
Thunderstrom and Rain
376
0K
100K
200K
300K
400K
500K
600K
700K
800K
900K
1000K
1100K
1200K
1300K
Weather During timeline
Number of bike riders

WORK SHEET 3


Total Hour
Hour of T..
0 29,064
1 18,881
2 12,704
3 8,805
4 6,664
5 10,124
6 43,790
7 138,738
8 266,263
9 154,635
10 102,190
11 113,207
12 142,343
13 151,047
14 152,474
15 164,928
16 198,050
17 291,178
18 277,341
19 179,211
20 115,873
21 77,781
22 60,364
23 44,592
0K 10K 20K 30K 40K 50K 60K 70K 80K 90K 100K 110K 120K 130K 140K 150K 160K 170K 180K 190K 200K 210K 220K 230K 240K 250K 260K 270K 280K 290K 300K 310K
Total time spent During timeline
Number of bike riders

WORKSHEET 5

Temprature vs Wind Speed Between 2016-02-01 and 2016-06-01

Temp C	Wind Speed Kph 0.0	3.4	6.9	10.3	13.7	17.2	20.6	24.0	27.4	30.9	34.3	37.7	41.2	44.6	48.0	51.5	54.9
0.0	5,860	13,265	14,625	4,094	2,428	1,727											
2.4	9,625	22,365	41,579	21,134	16,185	23,427	9,563	840	365								
4.9	7,935	31,524	61,025	84,544	99,675	69,279	82,100	35,398	11,448	8,978	4,083	1,734		1,232		65	
7.3	3,044	32,517	75,779	35,669	121,169	119,313	59,658	44,836	32,122	18,201	6,808	2,440	3,958	2,910	1,745	47	556
9.8	10,080	40,578	95,876	73,312	136,918	82,046	93,374	42,872	50,328	33,334	12,053	15,860	3,453	1,296			
12.2	3,301	43,562	78,448	76,971	126,734	75,025	49,905	18,937	24,903	18,243	6,655	6,291		1,534			
14.6	6,415	39,376	84,377	116,451	164,353	135,364	66,836	37,361	4,363	1,320	2,861						
17.1	4,672	18,595	60,324	76,219	91,329	98,998	59,202	21,963	5,062								
19.5		10,097	29,360	22,863	37,308	87,618	48,431	14,217									
22.0		11,455	7,078	21,379	13,204	25,377	11,094	28,748	3,735								
24.4			1,614			4,181	8,404	3,728									

temperature during timeline

Wind Speed

No. of people during specific temp and wind speed

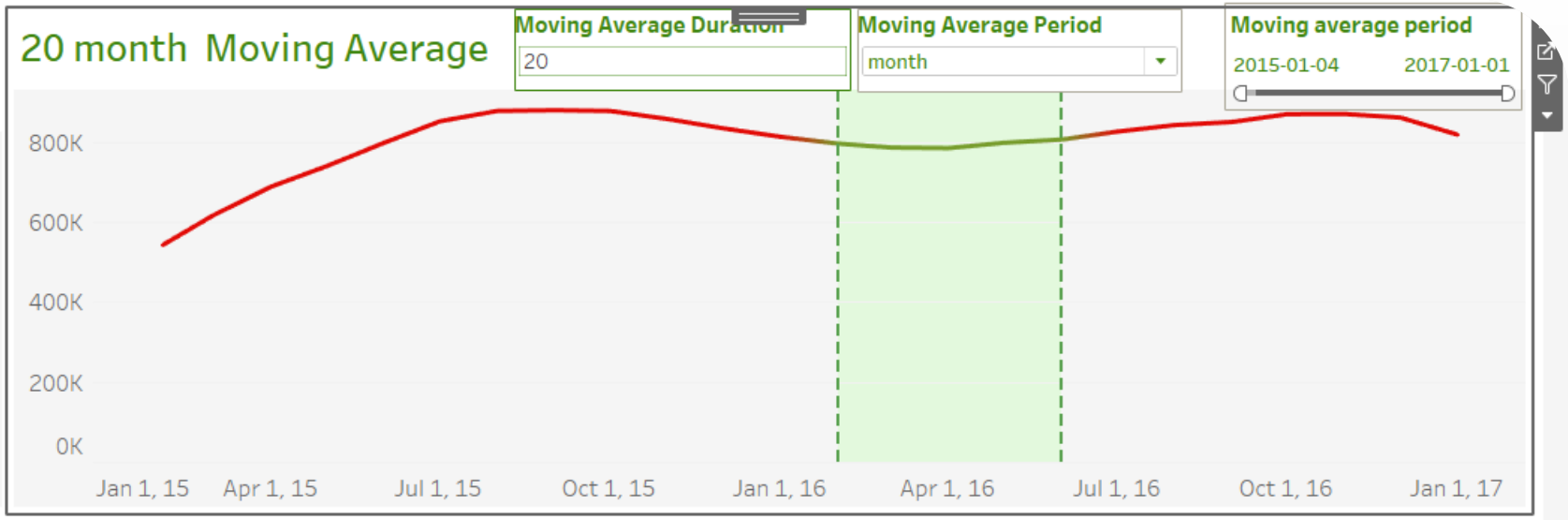
WORKSHEET 6

DASHBOARD

London Bike Rides

Between 2016-02-01 and 2016-06-01

3,954,095



Temprature vs Wind Speed Between 2016-02-01 and 2016-06-01

	Wind Speed Kph															
Temp C	0.0	3.4	6.9	10.3	13.7	17.2	20.6	24.0	27.4	30.9	34.3	37.7	41.2	44.6	48.0	51.5	54.9
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4.9	7,935	31,524	61,025	84,544	99,675	69,279	82,100	35,398	11,448	8,978	4,083	1,734		1,232		65	
7.3	3,044	32,517	75,779	35,669	121,169	119,313	59,658	44,836	32,122	18,201	6,808	2,440	3,958	2,910	1,745	47	556
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22.0		11,455	7,078	21,379	13,204	25,377	11,094	28,748	3,735								
24.4			1,614			4,181	8,404	3,728									

THANKYOU