Data Engineering Graphs & Plots

Task 2.I Numeric Results & Graph:

```
NORTH LANE SPEED DDS
        Range       Q1       Q2       Q3      IQR
Lane
1      57.787   24.233   28.584   31.691    7.458
2      98.174   23.613   28.584   32.310    8.697
3      60.272   24.855   30.447   34.176    9.321
```
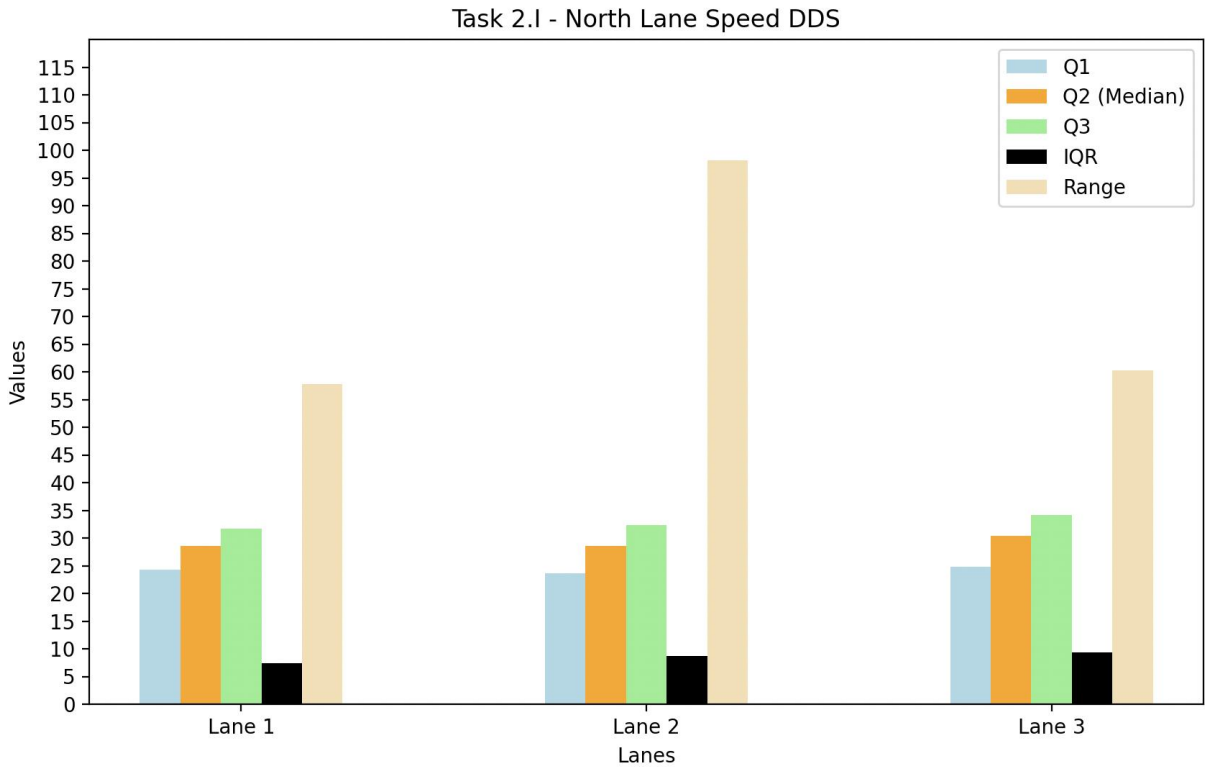
Figure 1: North Lane Speed DDS Report

Figure 2: North Lane Speed DDS Graph

Task 2.II Numeric Results & Graph:

```
SOUTH LANE SPEED DDS
      SouthRange   SouthQ1   SouthQ2   SouthQ3   SouthIQR
Lane
4         76.430    32.932    36.661    39.768      6.836
5         62.757    31.691    34.798    37.903      6.212
6         53.438    30.447    33.554    36.661      6.214
```
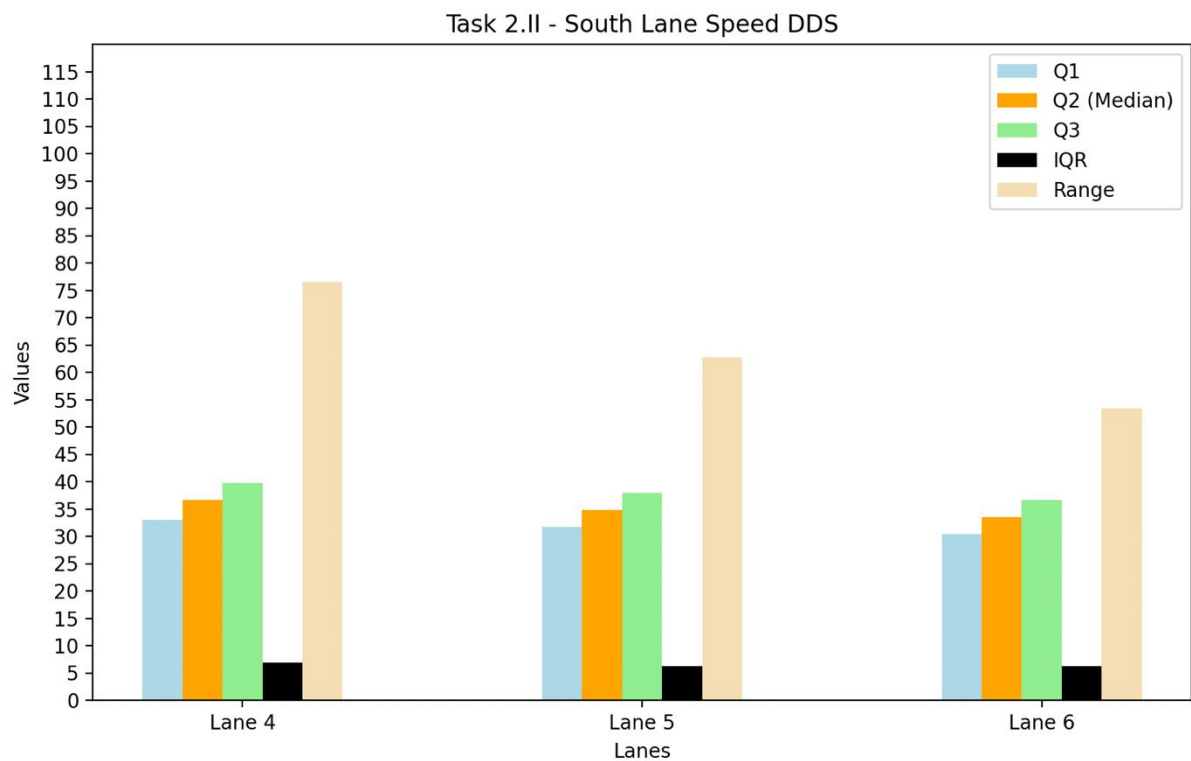
Figure 3: South Lane Speed DDS Report

Figure 4: South Lane Speed DDS Graph

Task 2.III Numeric Results & Graph:

```
TASK 2.III
NORTH LANES
Lane Size [First Third, Second Third, Last Third] of the hour:  [1050  994  871]
 Range Lane 1: 179,
 Q1 Lane 1: 932.5,
 Q2 Lane 1: 994.0,
 Q3 Lane 1: 1022.0,
 IQR Lane 1: 89.5

Lane Size [First Third, Second Third, Last Third] of the hour:  [1211 1172 1006]
 Range Lane 2: 205,
 Q1 Lane 2: 1089.0,
 Q2 Lane 2: 1172.0,
 Q3 Lane 2: 1191.5,
 IQR Lane 2: 102.5

Lane Size [First Third, Second Third, Last Third] of the hour:  [1265 1209  943]
 Range Lane 3: 322,
 Q1 Lane 3: 1076.0,
 Q2 Lane 3: 1209.0,
 Q3 Lane 3: 1237.0,
 IQR Lane 3: 161.0
```

Figure 5: Traffic Volume of North Lanes DDS

```
SOUTH LANES
Lane Size [First Third, Second Third, Last Third] of the hour:  [541 605 520]
 Range Lane 4: 85,
 Q1 Lane 4: 530.5,
 Q2 Lane 4: 541.0,
 Q3 Lane 4: 573.0,
 IQR Lane 4: 42.5

Lane Size [First Third, Second Third, Last Third] of the hour:  [674 673 639]
 Range Lane 5: 35,
 Q1 Lane 5: 656.0,
 Q2 Lane 5: 673.0,
 Q3 Lane 5: 673.5,
 IQR Lane 5: 17.5

Lane Size [First Third, Second Third, Last Third] of the hour:  [919 850 772]
 Range Lane 6: 147,
 Q1 Lane 6: 811.0,
 Q2 Lane 6: 850.0,
 Q3 Lane 6: 884.5,
 IQR Lane 6: 73.5
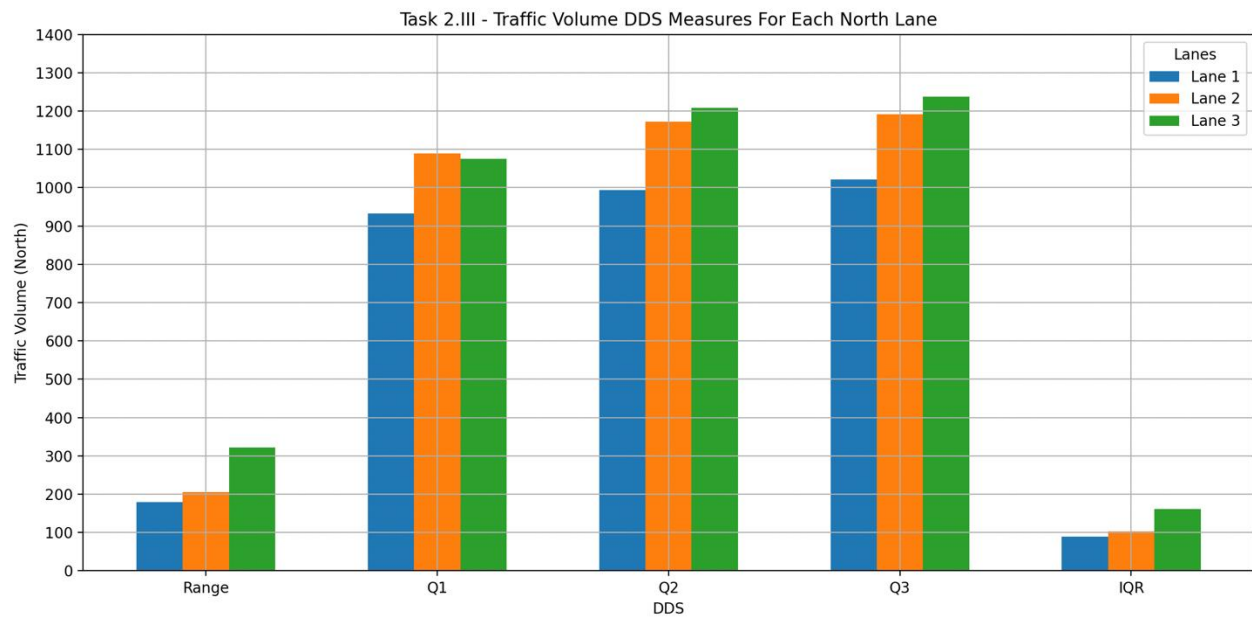```

Figure 6: Traffic Volume of South Lanes DDS

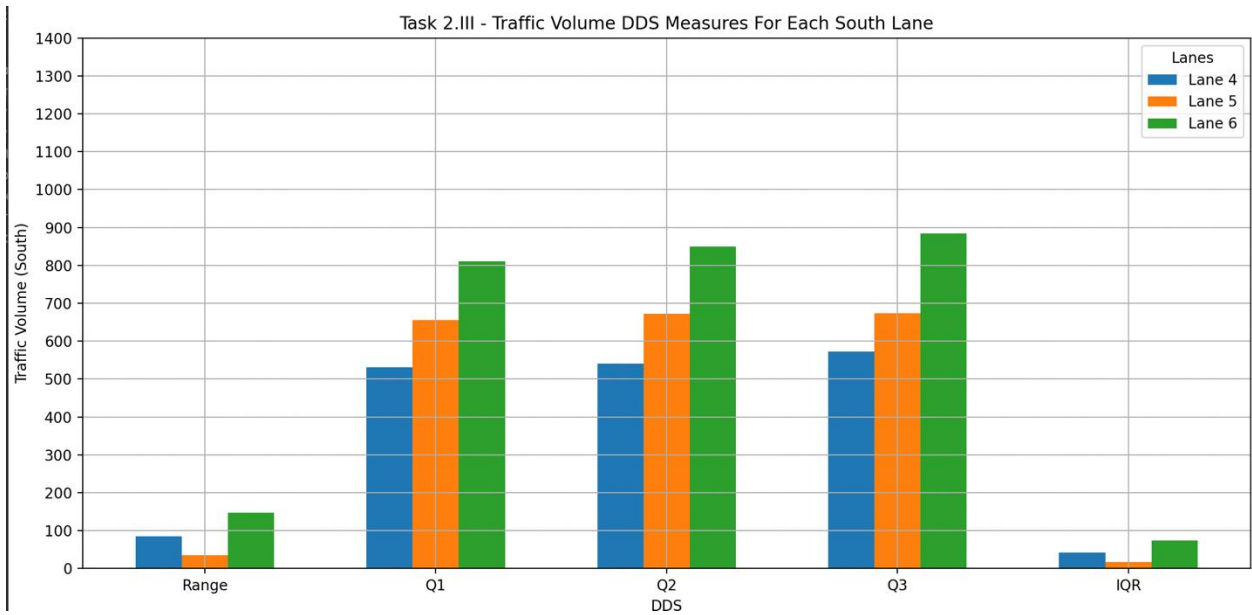*Figure 7: North Lanes Traffic Volume Time Interval Tuesday*



*Figure 8: South Lanes Traffic Volume Time Interval Tuesday*

# Task 3.I Numeric Results & Graph:

```
Tuesday
Hour
7      19866
8      19448
9      15914
10     12715
11     12711
12     13632
13     13828
14     14536
15     17147
16     21721
17     21799
18     17808
19     11640
20      7852
21      5983
22      4266
23      2351
dtype: int64
AVG:  13718.64705882353
```

Figure 9: Tuesday Hour Traffic Volume + Average Per Hour

```
Friday
Hour
7      19225
8      19092
9      15587
10     13138
11     14071
12     15477
13     15798
14     16827
15     18676
16     21448
17     20596
18     15412
19     11080
20      8097
21      6088
22      5592
23      4165
dtype: int64
AVG:  14139.35294117647
```
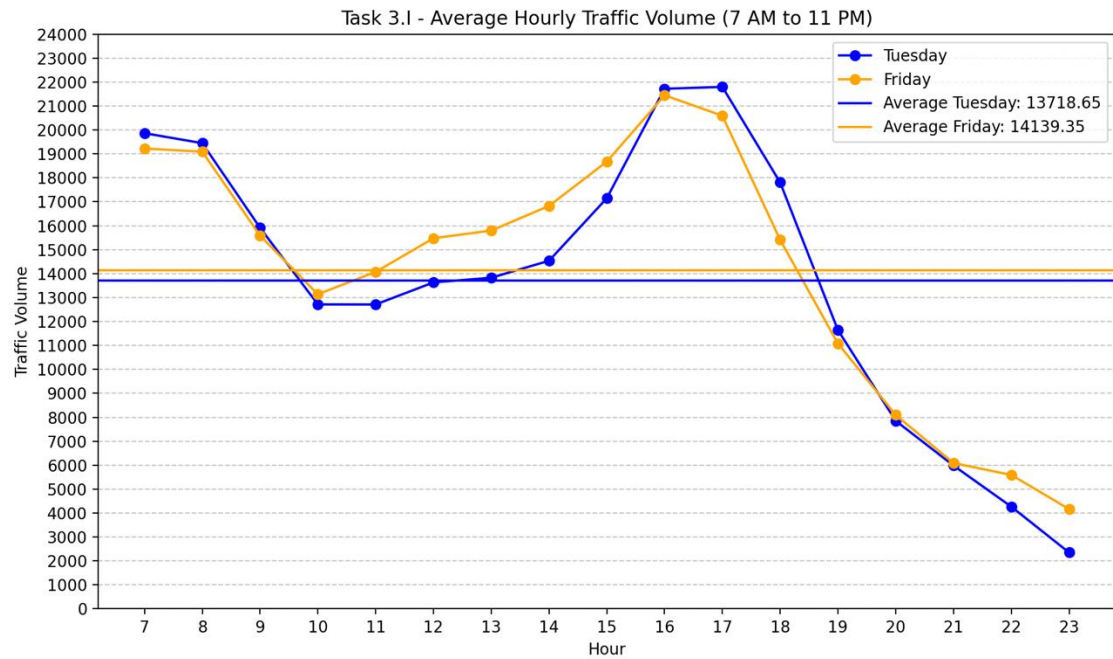
Figure 10: Friday Hour Traffic Volume + Average Per Hour

Figure 11: Average Per Hour Plot Friday + Tuesday