LONDON BIKE STANDS MERVE HOR ISTANBUL DATA SCIENCE ACADEMY – SUMMER 2020

PROJECT INFO

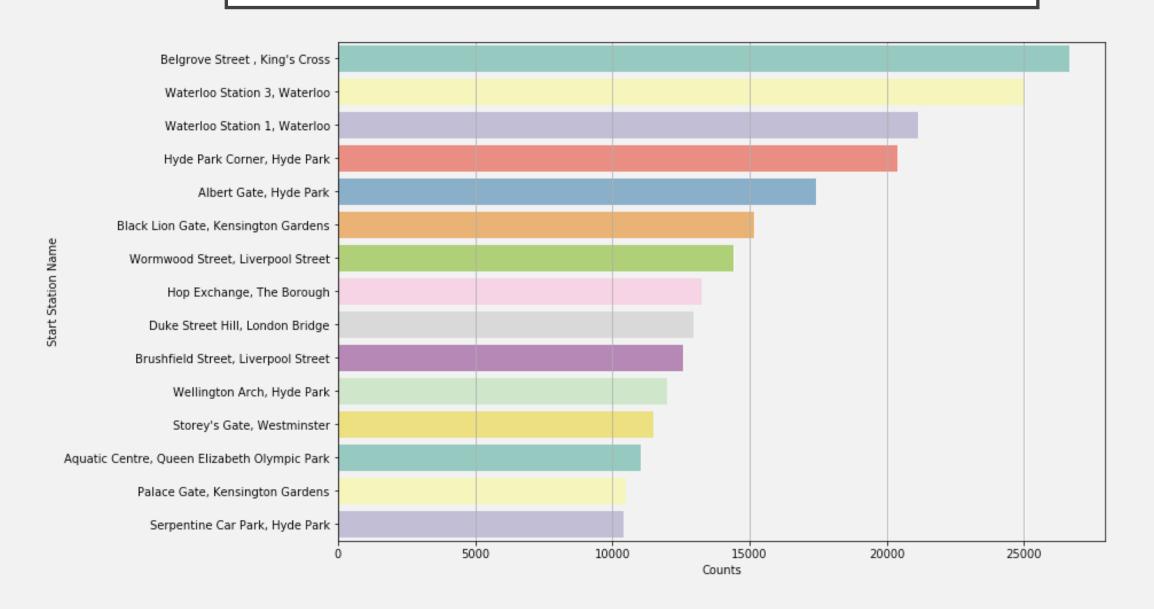
- Problem: The problem of not being able to rent or drop a bicycle at the stand during rush hours
- **Solution**: Transfer among the stands where bicycles are the most picked up and dropped
- Data : Transportation for London

| | WEEKDAY | WEEKEND |
|--------------------|------------|-------------|
| MORNING RUSH HOURS | 7AM - 9 AM | 9-IIAM |
| NOON RUSH HOURS | - | 12 AM – 5PM |
| EVENING RUSH HOURS | 4PM - 6PM | 6PM - 9PM |

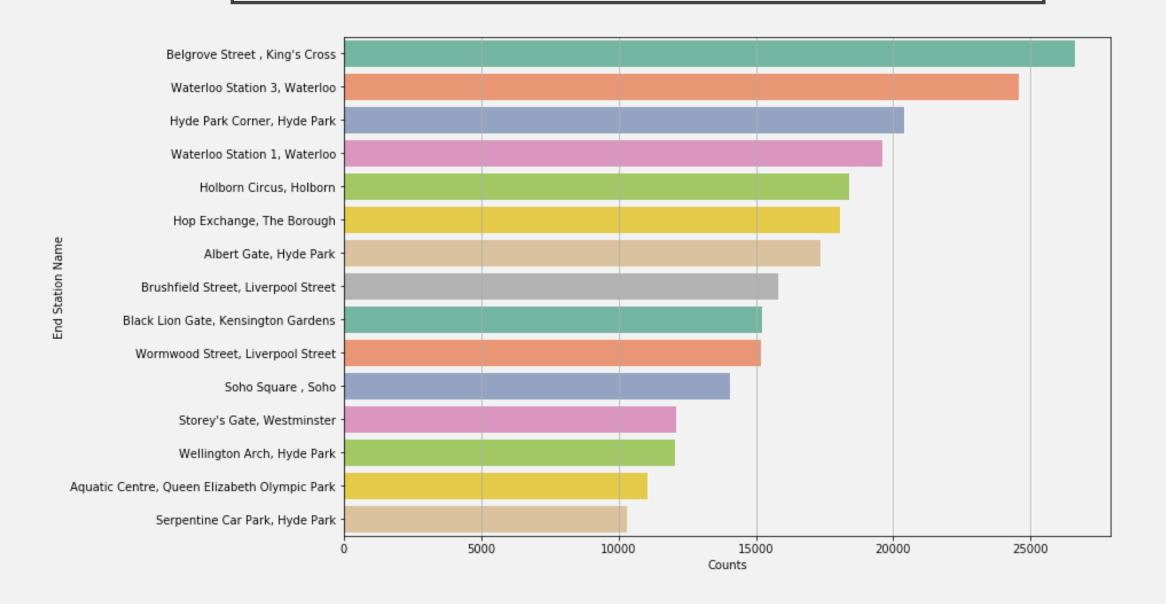
METHODOLOGY

- Determine top 15 busiest stations
- Determine the most used time intervals by weekdays and weekends
- Decide to transfer among the stands where bicycles are the most picked up and dropped

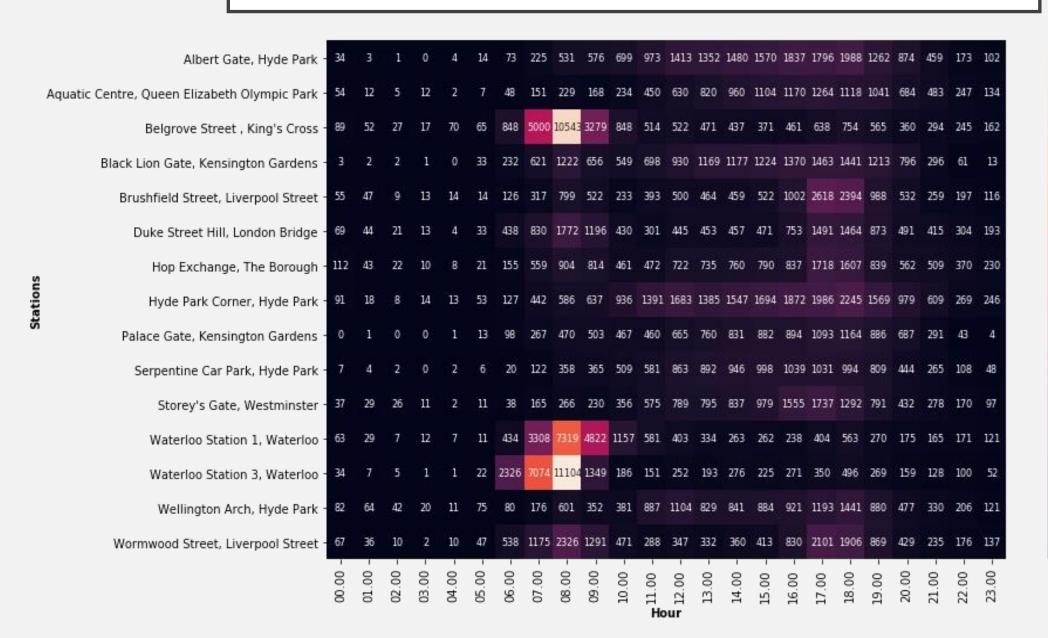
TOP 15 START STATIONS



TOP 15 END STATIONS



WEEKDAY HOURS



- 10000

- 8000

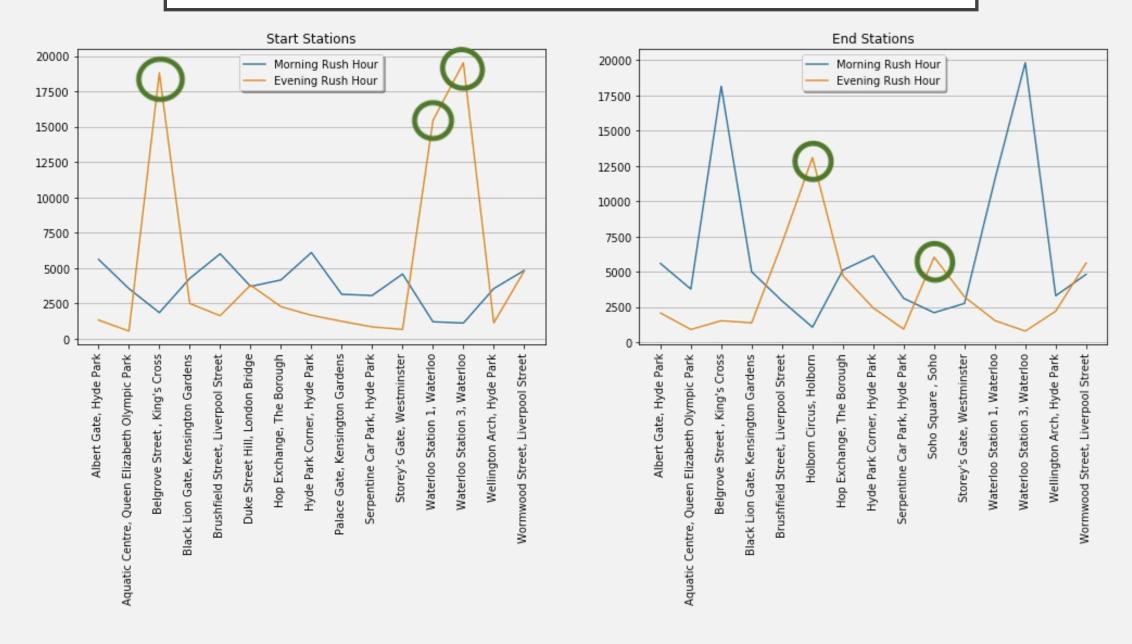
- 6000

- 4000

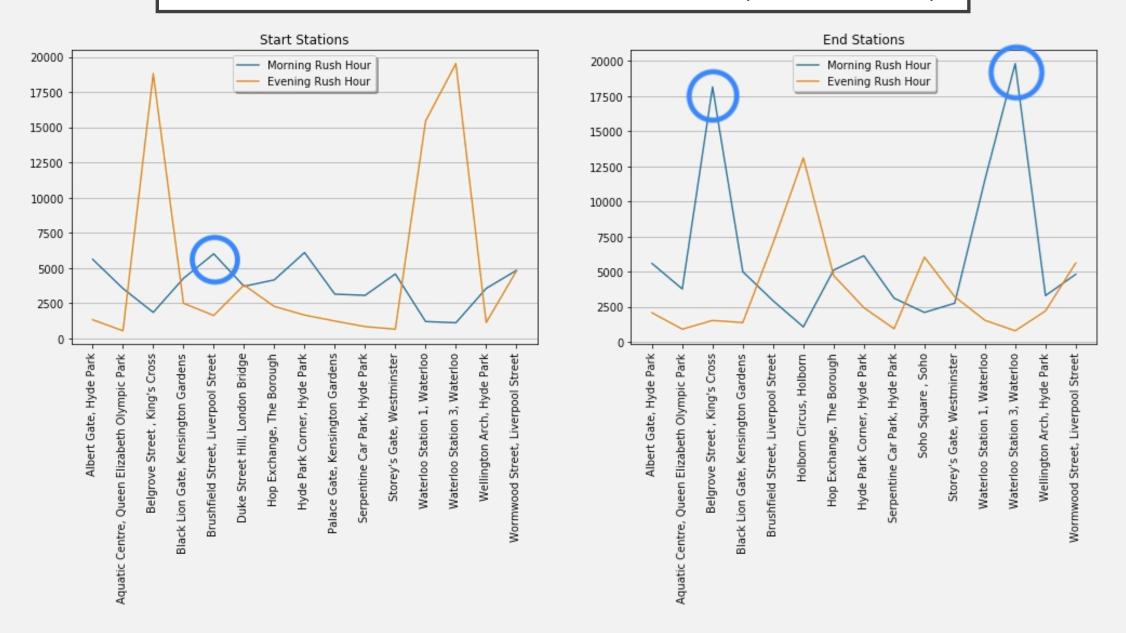
- 2000

0

WEEKDAY RECOMMENDATIONS (EVENING)



WEEKDAY RECOMMENDATIONS (MORNING)



WEEKEND HOURS

| | | | | | | | | | | | | | | | | - | | | | | | | | | |
|----------|---|---------|---------|---------|---------|---------|---------|---------|----------|---------|---------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Albert Gate, Hyde Park | 6 | 1 | 2 | 0 | 7 | 0 | 18 | 44 | 87 | 157 | 280 | 538 | 686 | 836 | 898 | 850 | 865 | 783 | 752 | 569 | 413 | 260 | 101 | 36 |
| Aqu | atic Centre, Queen Elizabeth Olympic Park | 55 | 25 | 10 | 10 | 3 | 5 | 6 | 14 | 26 | 74 | 175 | 32B | 440 | 487 | 598 | 758 | 748 | 726 | 637 | 637 | 405 | 299 | 146 | 117 |
| | Belgrove Street , King's Cross | 49 | 31 | 24 | 25 | 20 | 26 | 62 | 61 | 102 | 139 | 151 | 175 | 206 | 209 | 224 | 197 | 267 | 236 | 248 | 169 | 136 | 120 | 108 | 53 |
| | Black Lion Gate, Kensington Gardens | 1 | 1 | 2 | 0 | 0 | 9 | 19 | 31 | 97 | 192 | 305 | 581 | 807 | 984 | 986 | 1093 | 1058 | 1083 | 949 | 759 | 564 | 165 | 28 | 10 |
| | Brushfield Street, Liverpool Street | 49 | 37 | 22 | 36 | 26 | 45 | 34 | 48 | 71 | 120 | 203 | 264 | 272 | 351 | 385 | 294 | 280 | 248 | 232 | 164 | 127 | 97 | 98 | 67 |
| | Holborn Circus, Holborn | 11 | 6 | 5 | 8 | 7 | 5 | 7 | 15 | 18 | 22 | 67 | 70 | 94 | 97 | 89 | 115 | 68 | 84 | 71 | 56 | 62 | 27 | 25 | 11 |
| v | Hop Exchange, The Borough | 75 | 38 | 27 | 23 | 29 | 9 | 24 | 60 | 144 | 256 | 396 | 456 | 506 | 537 | 592 | 458 | 381 | 356 | 334 | 266 | 211 | 114 | 87 | 78 |
| Stations | Hyde Park Corner, Hyde Park | 35 | 15 | 5 | 4 | 8 | 11 | 36 | 42 | 99 | 258 | 503 | 742 | 975 | 1216 | 1235 | 1292 | 1420 | 1313 | 944 | 825 | 490 | 282 | 81 | 6B |
| 55 | Serpentine Car Park, Hyde Park | 16 | 2 | 0 | 0 | 1 | 0 | 24 | 50 | 100 | 175 | 276 | 520 | 529 | 627 | 696 | 775 | 765 | 717 | 513 | 433 | 260 | 149 | 46 | 25 |
| | Soho Square , Soho - | 25 | 22 | 19 | 8 | 3 | 1 | 11 | 14 | 18 | 65 | 104 | 155 | 217 | 267 | 233 | 297 | 294 | 246 | 273 | 211 | 200 | 105 | 56 | 50 |
| | Storey's Gate, Westminster | 26 | 34 | 19 | 10 | 17 | 9 | 33 | 54 | 76 | 171 | 347 | 452 | 526 | 521 | 516 | 538 | 614 | 503 | 553 | 320 | 205 | 144 | 65 | 51. |
| | Waterloo Station 1, Waterloo | 49 | 26 | 18 | 19 | 15 | 19 | 16 | 40 | 63 | 80 | 89 | 101 | 141 | 136 | 159 | 174 | 182 | 174 | 138 | 142 | 113 | 74 | 78 | 57 |
| | Waterloo Station 3, Waterloo | 13 | 7 | 0 | 2 | 1 | 1 | 5 | 20 | 19 | 23 | 22 | 53 | 49 | 36 | 50 | 60 | 61 | 77 | 70 | 42 | 50 | 36 | 26 | 26 |
| | Wellington Arch, Hyde Park | 57 | 46 | 18 | 27 | 19 | 2 | 15 | 27 | 32 | 138 | 396 | 491 | 616 | 748 | 817 | 769 | 665 | 698 | 568 | 459 | 268 | 212 | 84 | 48 |
| | Wormwood Street, Liverpool Street | 37 | 19 | 18 | 20 | 11 | 16 | 24 | 29 | 42 | 88 | 117 | 146 | 122 | 122 | 108 | 129 | 158 | 135 | 123 | 116 | 65 | 61 | 49 | 41 |
| | | - 00:00 | - 00.10 | - 00:00 | - 03:00 | 04.00 - | - 00:50 | - 00:90 | - 00'.00 | - 00:80 | - 00:60 | 10.00 | 11.00 - | 12.00 - | 13.00 - | 14.00 - | 15.00 - | 16.00 - | 17.00 - | 18.00 - | 19.00 - | 20.00 - | 21.00 - | 22.00 - | 23.00 - |

- 1400

- 1200

- 1000

- 800

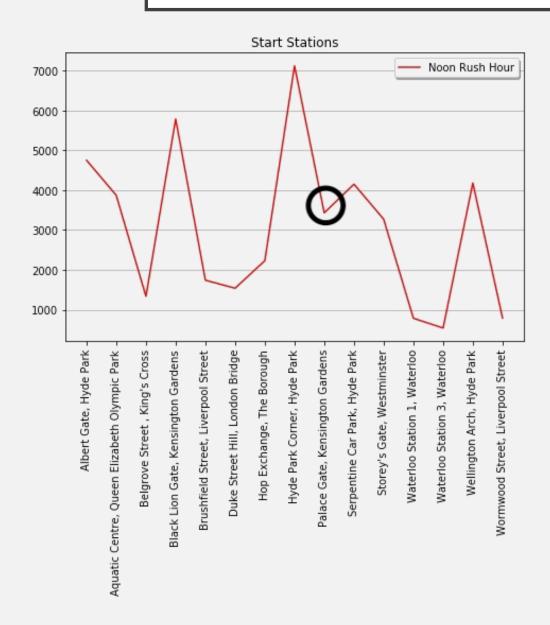
- 600

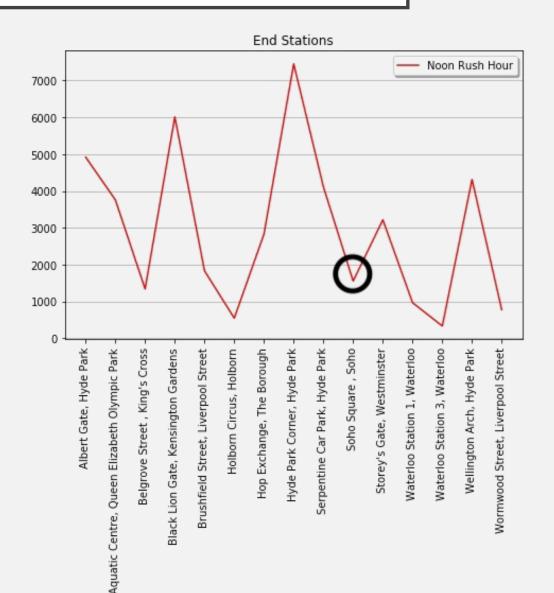
- 400

- 200

- 0

WEEKEND RECOMMENDATIONS





WEEKDAY EVENING

- Holborn Circus, Holborn
- Soho Square, Soho



- Belgrove Street, King's Cross
- Waterloo Station I, Waterloo
- Waterloo Station 3, Waterloo

WEEKDAY MORNING

- Belgrove Street, King's Cross
- Waterloo Station 3, Waterloo



Brushfield Street, Liverpool Street

WEEKEND

Soho Square, Soho



Palace Gate, Kensington Gardens

FUTURE WORKS

- Analyzing the data of the whole year and look at the differences based on season
- Showing station densities on London map