B analytics ZA Cycling 2024

August 28, 2024

```python
[1]: import plotly.express as px
     import pandas as pd
```

```python
[2]: fig = px.scatter(x=[0, 1, 2, 3, 4], y=[0, 1, 4, 9, 16])
     fig.show()
```

```python
[3]: data_pkl = "outputs/final_reconstituted 24-08-28.pkl"
     all_data = pd.read_pickle(data_pkl)
     all_data
```

```
[3]:               start_time     completion_time  star_rating  \
     0    2024-03-20 13:45:57 2024-03-20 13:47:45         <NA>
     1    2024-03-20 14:00:18 2024-03-20 14:02:21            5
     2    2024-03-20 14:27:17 2024-03-20 14:28:30            4
     3    2024-03-20 14:27:17 2024-03-20 14:28:48            5
     4    2024-03-20 14:27:32 2024-03-20 14:28:52            5
     ...                  ...                 ...          ...
     5834 2024-04-08 16:06:24 2024-04-08 16:25:14            4
     5835 2024-04-09 08:00:24 2024-04-09 08:01:21            5
     5836 2024-04-09 08:45:35 2024-04-09 08:53:33            5
     5837 2024-04-09 09:56:55 2024-04-09 09:59:45            5
     5838 2024-04-09 10:18:58 2024-04-09 10:22:53            5

                                             txt_what_liked  \
     0                                                  none
     1                                The Team who organise it
     2                            well organised great helpers
     3                                          Road closures
     4                    Well organized event and great route
     ...                                                   ...
     5834  Nice Scenery Clean and good road Support Far bars
     5835                                            Everything
     5836  Wonderful route to ride on closed roads Except…
     5837                                            Atmostphere
     5838  The amount of water points and the organizatio…

                                       txt_what_liked_theme  \
```

1

```
0                                                    no theme
1        Impressive organization for such a large event.
2        Impressive organization for such a large event.
3            Full road closures ensuring cyclist safety.
4            Well organized event with efficient logistics.
…                                                           …
5834   Spectacular scenic route around the Cape Penin…
5835                                                 no theme
5836        Full road closures ensuring cyclist safety.
5837   Great atmosphere and camaraderie among partici…
5838          Sufficient and well-placed water stations.

                                    txt_what_not_liked  \
0                                                  none
1                                   Nothing comes to mind
2                                     start a little too late
3              It is getting dangerous with larger groups
4                    Think its starting to get quite pricey
…                                                           …
5834   Parking is always a problem  Have to be really…
5835                           No free coffees at the end
5836   Strange seeding anomalies and Ebikes as part o…
5837                                                  wind
5838   The waterbottle fills ups at the water points …

                                    txt_what_not_liked_theme  \
0                                                  no theme
1                                                  no theme
2        Lack of clear signage at the start and finish.
3            Large start groups causing safety concerns.
4            High entry fees compared to value received.
…                                                           …
5834          Lack of food and snacks at water stations.
5835          Lack of food and snacks at water stations.
5836   Confusing communication regarding race rules a…
5837          Windy conditions affecting race experience.
5838          Lack of food and snacks at water stations.

                                    txt_do_to_improve  \
0                                                  none
1        Alp du Hez experience at the top of Alp du Sui…
2                                         start earlier
3                          Rider safety in large groups
4                                                    Na
…                                                           …
5834   It seems we pay more and get less No usable vo…
5835                             Free coffees at the end
```

```
5836    In time there needs to be dedicated Ebike events
5837                  more castle lites at the beer tent
5838                                                 none

                                txt_do_to_improve_theme  \
0                                               no theme
1      Encourage more crowd support and entertainment…
2      Implement a rolling start to reduce bottleneck…
3      Ensure better road conditions along the race r…
4                                               no theme
…                                                     …
5834   Improve the quality and variety of items in th…
5835                                            no theme
5836   Create a separate start group for ebikes to av…
5837                                            no theme
5838                                            no theme

                                      txt_anything_else  …  \
0                                                  none  …
1                                             brilliant  …
2                                   much better than KMs  …
3                                                  Nope  …
4                                                    Na  …
…                                                     …  …
5834   It is still my best SA cycle event so far But …  …
5835                                            Loved it  …
5836                                                none  …
5837                                                  no  …
5838   the support and gees everytime is just so amazing  …

      start_group_demog  gender_demog age_group_demog  country_demog  \
0                  <NA>           NaN            <NA>           <NA>
1                  <NA>           NaN            <NA>           <NA>
2                    9E             2           45-49   South Africa
3                     #             2           40-44   South Africa
4                    8B             2           35-39   South Africa
…                   …             …              …              …
5834                 Dh             1           55-59   South Africa
5835                 7C             2           40-44   South Africa
5836                 4A             2           60-64   South Africa
5837                 6A             2           65-69   South Africa
5838                 8B             1           Elite   South Africa

      province_demog number_finished_demog reg_day_demog reg_hour_demog  \
0               <NA>                  <NA>          <NA>           <NA>
1               <NA>                  <NA>          <NA>           <NA>
2       Western Cape                     3             8             11
```

```
3         Western Cape                    20           8          13
4         Western Cape                     3           7          12
...            ...                        ...         ...         ...
5834      Western Cape                     3           9          11
5835      Western Cape                     6           8          15
5836      Western Cape                     6           9          13
5837          Limpopo                   <NA>           9          11
5838        Free State                     1           9          11

      PPA_demog  has_result_demog
0         <NA>              <NA>
1         <NA>              <NA>
2         <NA>                 1
3         <NA>                 1
4         <NA>                 1
...        ...               ...
5834      <NA>                 1
5835      <NA>                 1
5836      <NA>                 1
5837      <NA>                 1
5838      <NA>                 1

[5839 rows x 24 columns]
```

```python
fig = px.histogram(all_data, x="star_rating", title = "Star Ratings")
fig.show()
```