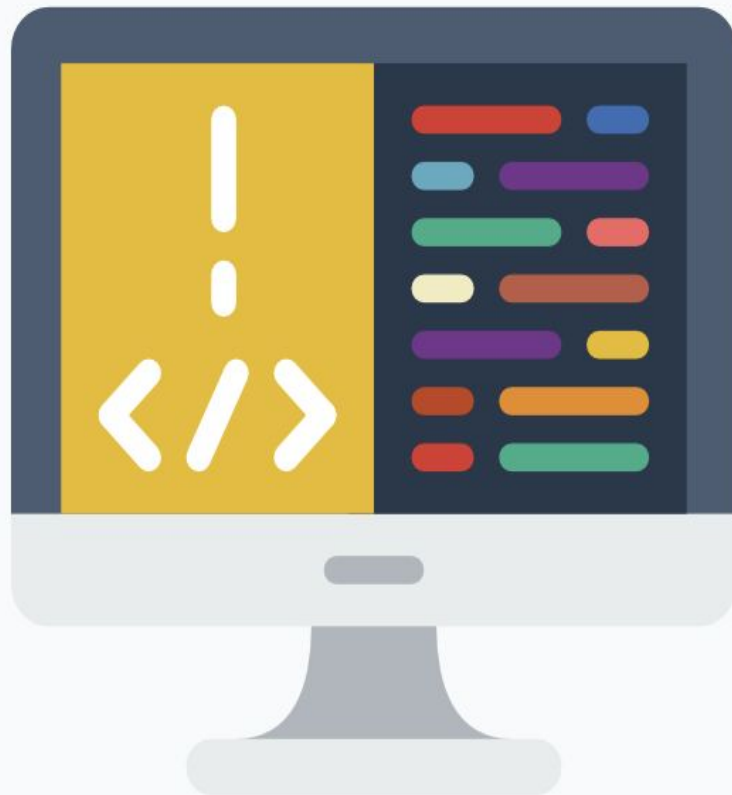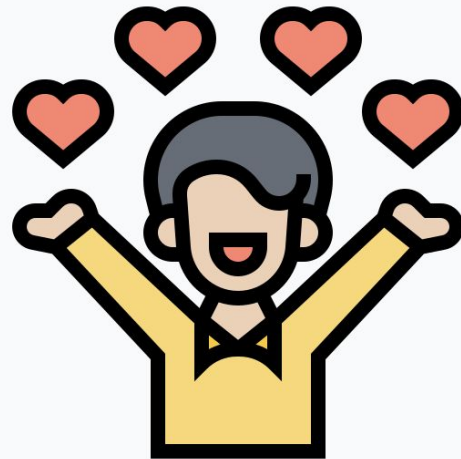# World Happiness

Group 3

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Schedule

1. WordCloud, which is the happiest country?

2. Bumpchart, changes in ranking (2015-2022)

3. HeatMap, how are difference matrics correlated?

4. Comparison, happy vs not happy

5. Conclusion

1 The happiest country

We analyze the top 10 happiest countries during 2015-2022 according to the dataset (Mainly based on happiness score).

	RANK	Country	Happiness score
0	1	Finland	7,821
1	2	Denmark	7,636
2	3	Iceland	7,557
3	4	Switzerland	7,512
4	5	Netherlands	7,415
...	...	...	...
142	143	Rwanda*	3,268
143	144	Zimbabwe	2,995
144	145	Lebanon	2,955
145	146	Afghanistan	2,404

```
sorted(country_scores.items(), key = lambda x:x[1], reverse=True)

[('Finland', 61.1606999476709),
 ('Denmark', 60.631599677968026),
 ('Switzerland', 60.19989976503833),
 ('Iceland', 60.17050009892017),
 ('Norway', 59.950000095290775),
 ('Netherlands', 59.3509000780415),
 ('Sweden', 58.69649980889136),
 ('New Zealand', 58.34160025369972),
 ('Canada', 36.75299998474121),
 ('Australia', 29.152999919891357),
 ('Austria', 21.808199944000002),
 ('Luxembourg', 14.561500191),
 ('Luxembourg*', 7.404),
 ('Israel', 7.364)]
```

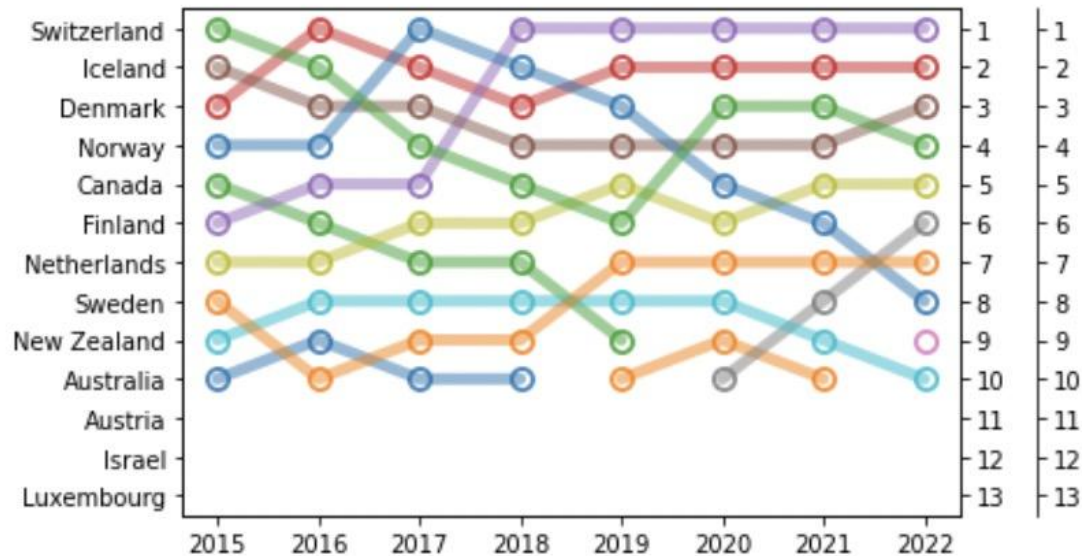Data sample of 2022 happiness country.   Happiest country sorted by happiness score.

1 The happiest country

Word cloud chart is used to show the happiest country in the world (Word size based on the final happiness score).

2.Finland rose from the third place in 2017 to top 1 since 2018; Norway lose the top 3 spots since 2017

2.Code: bumpchart

```python
import pandas as pd
import matplotlib.pyplot as plt

def bumpchart(df, show_rank_axis= True, rank_axis_distance= 1.1,
              ax= None, scatter= False, holes= False,
              line_args= {}, scatter_args= {}, hole_args= {}):

    if ax is None:
        left_yaxis= plt.gca()
    else:
        left_yaxis = ax

    # Creating the right axis.
    right_yaxis = left_yaxis.twinx()

    axes = [left_yaxis, right_yaxis]

    # Creating the far right axis if show_rank_axis is True
    if show_rank_axis:
        far_right_yaxis = left_yaxis.twinx()
        axes.append(far_right_yaxis)
```
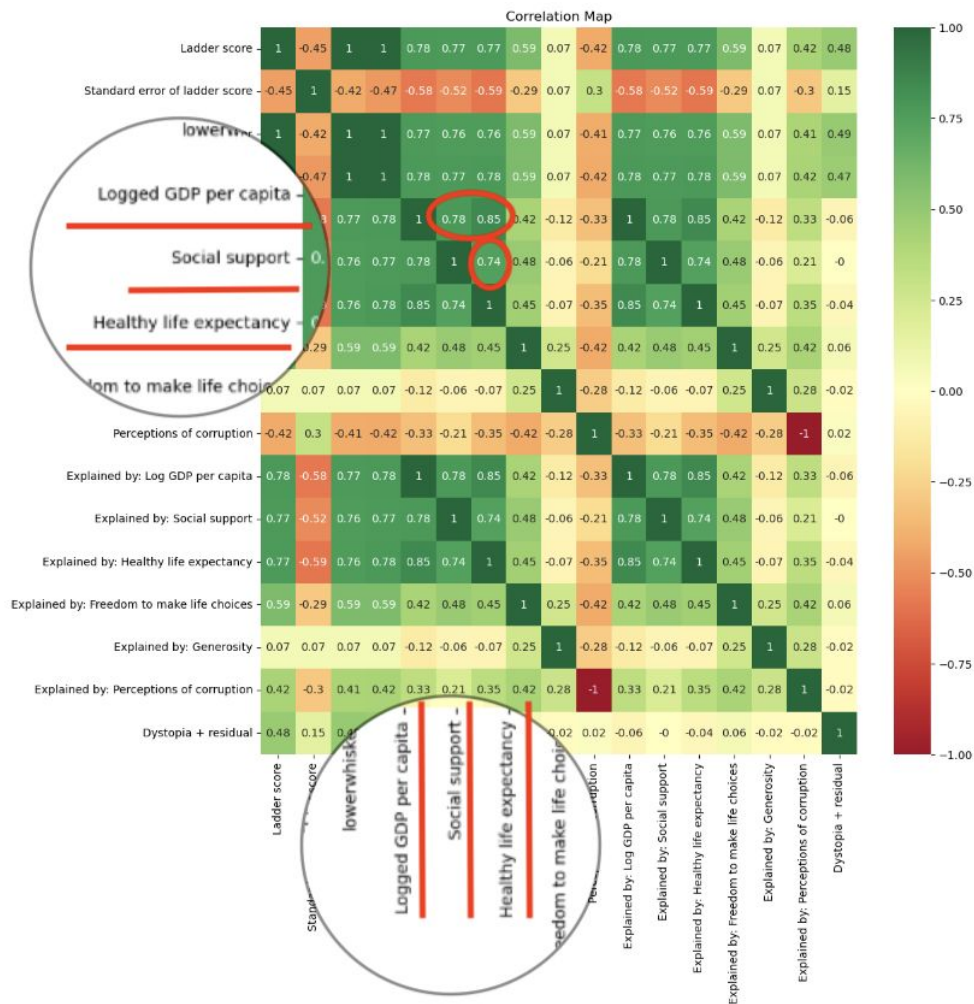
Correlation with different factors
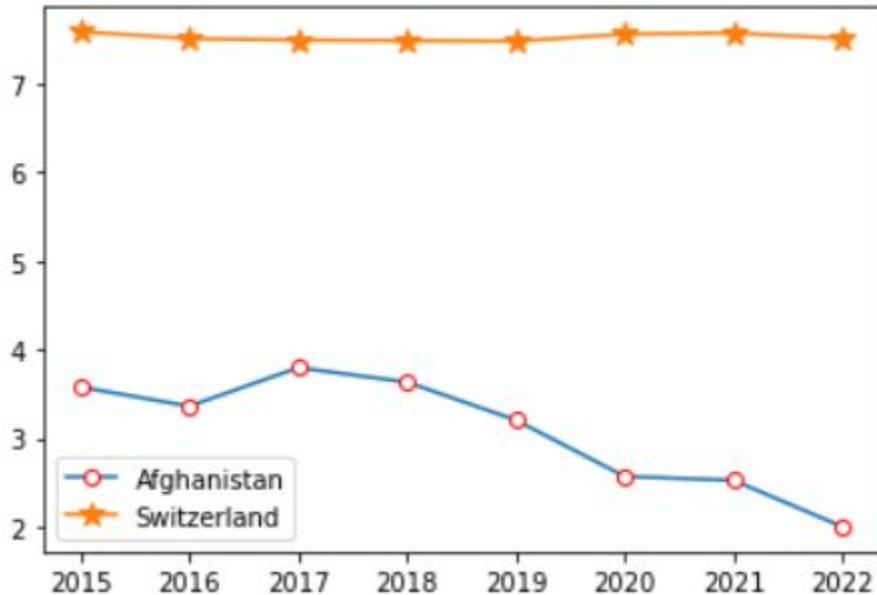
Correlation Map
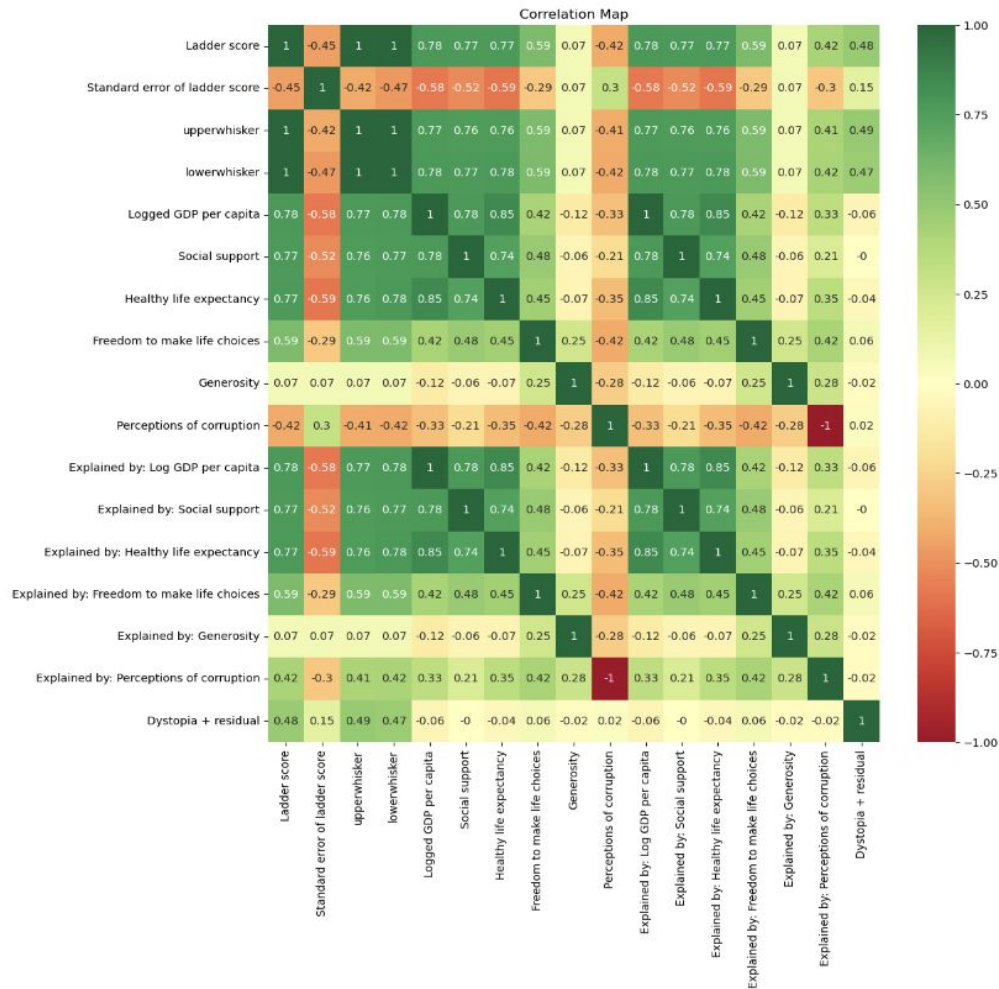
Logged GDP per capita x Socila Support:0.78
Logged GDO per capita x Health life expectancy:(
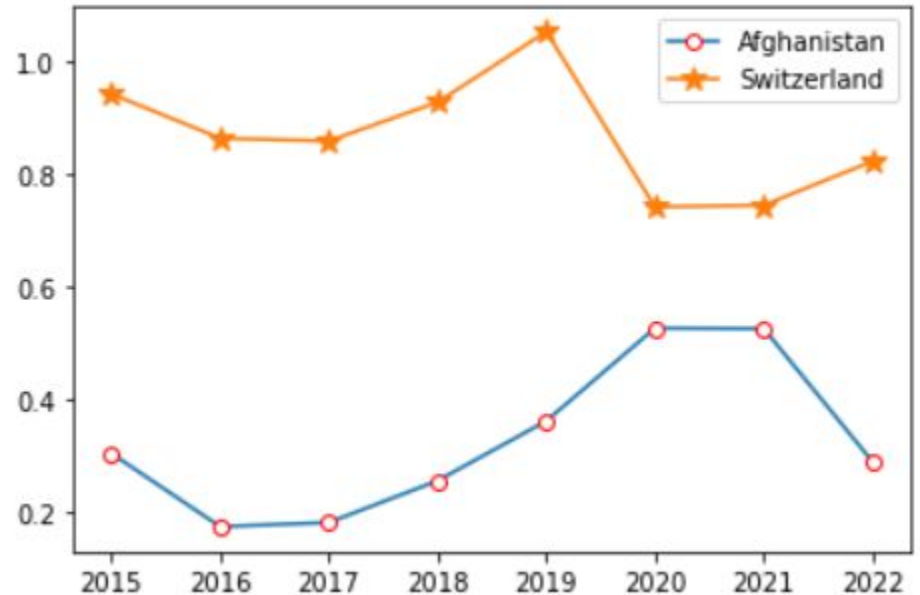Health life expectancy x Social Support:0.74

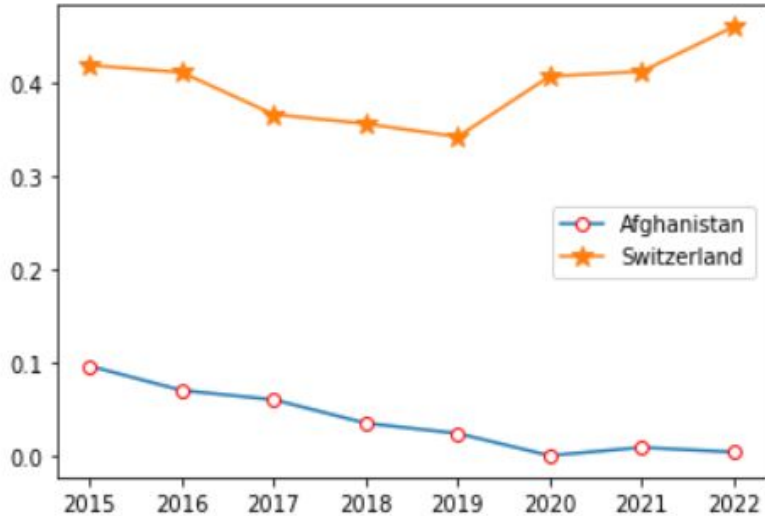# Happy or not Happy? Switzerland and Afghanistan
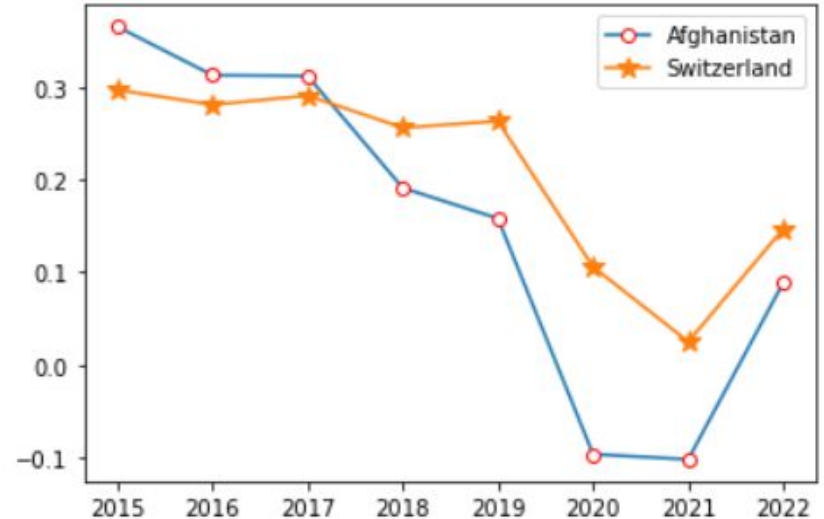

Happiness Rank

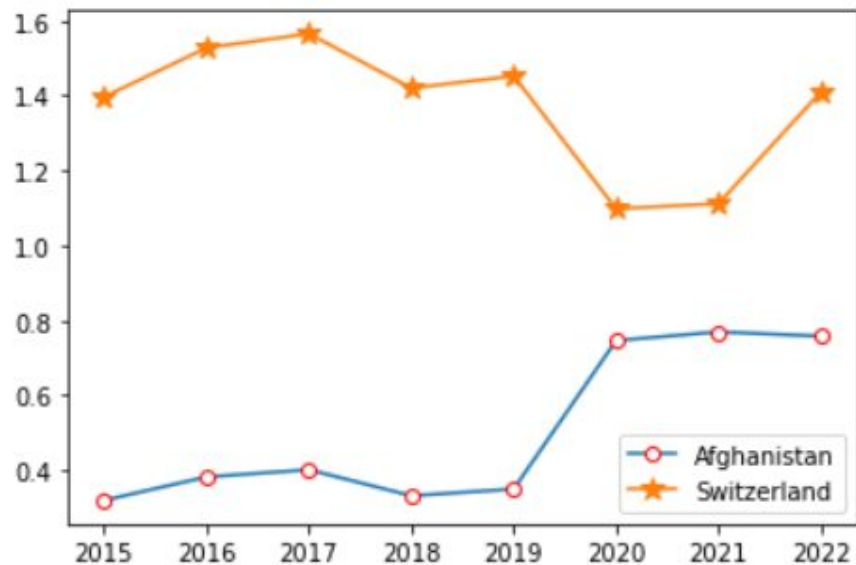Health

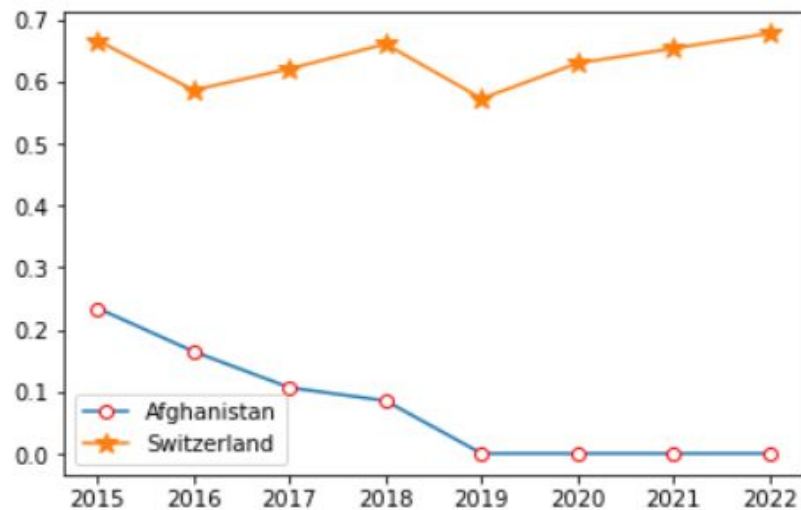# Happy or not Happy? Switzerland and Afghanistan

Happy or not Happy?

Economy

Freedom

Thank you for all !!