Capstone project
“Climate and Happiness”

Data

1) World Happiness Report Data

The data we use comes from the official world happiness report, compare https://en.wikipedia.org/wiki/World_Happiness_Report .

It is based on annual samples for the world as a whole, we will use the average data for the years 2016-2018. Three main happiness measures are reported, here we will only consider the first one of them: individual life evaluations. The life evaluation used is the Cantril Ladder, which asks survey respondents to place the status of their lives on a “ladder” scale ranging from 0 to 10, where 0 means the worst possible life and 10 the best possible life.

In the report the effects of country wide factors as health, life expectancy, gdp, and individual factors as income, social support, generosity, and corruption perception, have been considered in detail. Here we will discard those factors and merge the happiness scores with climate scores for the respective countries. More informations about the data can be found on https://s3.amazonaws.com/happiness-report/2019/WHR19_Ch2A_Appendix1.pdf .

	Country	Happiness score
0	Finland	7.7689
1	Denmark	7.6001
2	Norway	7.5539
3	Iceland	7.4936
4	Netherlands	7.4876
5	Switzerland	7.4802
6	Sweden	7.3433
7	New Zealand	7.3075
8	Canada	7.2781
9	Austria	7.2460
10	Australia	7.2280
11	Costa Rica	7.1674
12	Israel	7.1387
13	Luxembourg	7.0903
14	United Kingdom	7.0537
15	Ireland	7.0211
16	Germany	6.9850
17	Belgium	6.9230
18	United States of America	6.8923
19	Czech Republic	6.8521

2) Temperature and precipitation data

We will import tables with typical temperature and precipitation dates. The world bank provides historic data for the years 1961-1999. Here we will use the respective data and claim that the general climate won't change significantly within 20 years. The data can be found on 'http://databank.worldbank.org/data/download/catalog/cckp_historical_data_0.xls' .

	ISO_3DIGIT	Annual_temp
0	AFG	12.921455
1	AGO	21.510933
2	ALB	11.269800
3	ARE	26.825609
4	ARG	14.215225

	ISO_3DIGIT	Annual_precip
0	AFG	311.321856
1	AGO	991.305683
2	ALB	1053.235184
3	ARE	67.812025
4	ARG	559.045871

There is the problem that the country column is represented by a 3 digit country code. So for merging (“inner join”) the happiness, temperature, and precipitation tables, we need to convert the codes to full country names. For this we will use the additional table 3*.

3*) Regional Codes Data

We found this additional table on https://raw.githubusercontent.com/lukes/ISO-3166-Countries-with-Regional-Codes/master/all/all.csv .

	name	alpha-2	alpha-3	country-code	iso_3166-2	region	sub-region	intermediate-region	region-code	sub-region-code	intermediate-region-code
0	Afghanistan	AF	AFG	4	ISO 3166-2:AF	Asia	Southern Asia	NaN	142.0	34.0	NaN
1	Åland Islands	AX	ALA	248	ISO 3166-2:AX	Europe	Northern Europe	NaN	150.0	154.0	NaN
2	Albania	AL	ALB	8	ISO 3166-2:AL	Europe	Southern Europe	NaN	150.0	39.0	NaN
3	Algeria	DZ	DZA	12	ISO 3166-2:DZ	Africa	Northern Africa	NaN	2.0	15.0	NaN
4	American Samoa	AS	ASM	16	ISO 3166-2:AS	Oceania	Polynesia	NaN	9.0	61.0	NaN

4) Country-wide geojson information will be collected with the foursquare api.