

# Covid-19 Data Analysis

# Introduction

- COVID-19 has been a devastating disease for many people
- Expected 1 million deaths
- Some country experience more severe infection
- Country like India, United States, and Brazil
- Some country does not have really many cases compared to other country
- Country such as South Korea, New Zealand

# Introduction

- What differs this country?
- Covid-19 total cases and death compared to country parameter
- Happiness index, GDP per capita, et cetera
- Correlation are made

# Introduction

- This analysis may interesting for public health academic and stakeholder
- To predict which country more prone to COVID-19
- Can be used also as predictor if any other pandemic happens

# Data

- 3 dataset are used
- Happyness index
- Country total cases
- Country total death

# Data

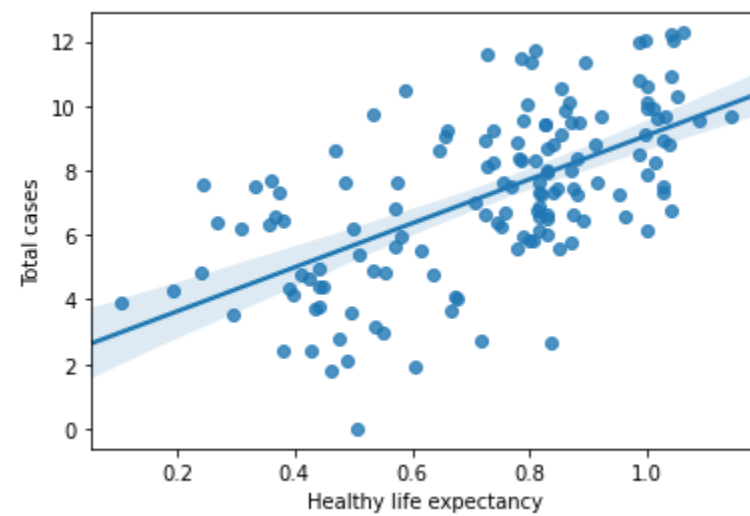
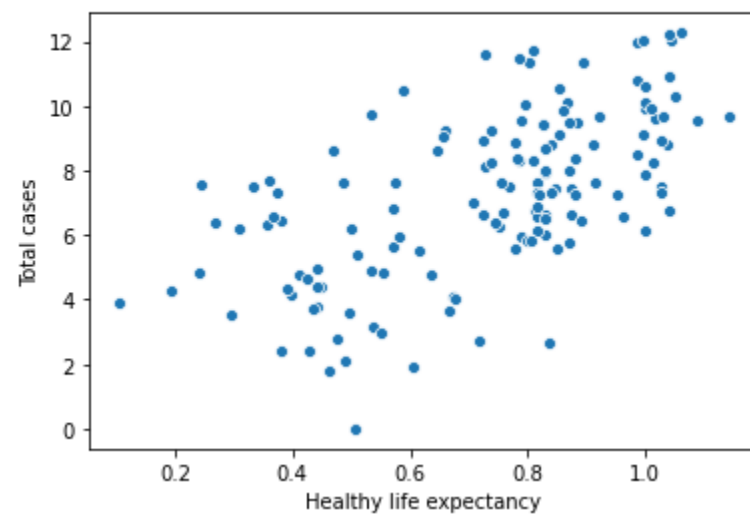
- Data in total case and total death are separated by province
- First it is aggregated
- I drop all the previous dates and only measure on the final day of the dataset which is April 30<sup>th</sup>
- Indexed with Country/Region
- Join with Inner join.

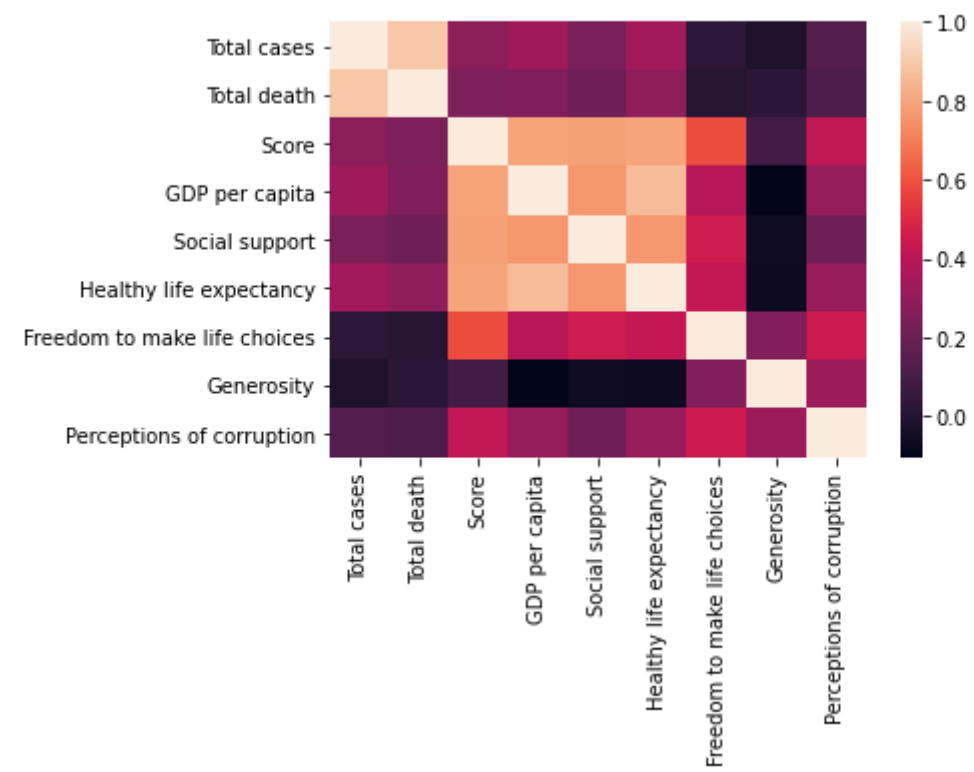
	Province/State	Country/Region	Lat	Long	1/22/20	1/23/20	1/24/20	1/25/20	1/26/20	1/27/20	...	4/21/20	4/22/20	4/23/20	4/24/20	4/25/20	4/26/20	4/27/20	4/28/20	4/29/20	4/30/20
0	NaN	Afghanistan	33.0000	65.0000	0	0	0	0	0	0	...	1092	1176	1279	1351	1463	1531	1703	1828	1939	2171
1	NaN	Albania	41.1533	20.1683	0	0	0	0	0	0	...	609	634	663	678	712	726	736	750	766	773
2	NaN	Algeria	28.0339	1.6596	0	0	0	0	0	0	...	2811	2910	3007	3127	3256	3382	3517	3649	3848	4006
3	NaN	Andorra	42.5063	1.5218	0	0	0	0	0	0	...	717	723	723	731	738	738	743	743	743	745
4	NaN	Angola	-11.2027	17.8739	0	0	0	0	0	0	...	24	25	25	25	25	26	27	27	27	27
5	NaN	Antigua and Barbuda	17.0608	-61.7964	0	0	0	0	0	0	...	23	24	24	24	24	24	24	24	24	24
6	NaN	Argentina	-38.4161	-63.6167	0	0	0	0	0	0	...	3031	3144	3435	3607	3780	3892	4003	4127	4285	4428
7	NaN	Armenia	40.0691	45.0382	0	0	0	0	0	0	...	1401	1473	1523	1596	1677	1746	1808	1867	1932	2066
8	Australian Capital Territory	Australia	-35.4735	149.0124	0	0	0	0	0	0	...	104	104	104	105	106	106	106	106	106	106
9	New South Wales	Australia	-33.8688	151.2093	0	0	0	0	3	4	...	2969	2971	2976	2982	2994	3002	3004	3016	3016	3025
10	Northern Territory	Australia	-12.4634	130.8456	0	0	0	0	0	0	...	28	28	28	28	28	28	28	28	28	28
11	Queensland	Australia	-28.0167	153.4000	0	0	0	0	0	0	...	1024	1024	1026	1026	1026	1030	1033	1034	1033	1033
12	South Australia	Australia	-34.9285	138.6007	0	0	0	0	0	0	...	437	438	438	438	438	438	438	438	438	438
13	Tasmania	Australia	-41.4545	145.9707	0	0	0	0	0	0	...	201	205	207	207	207	212	214	218	219	221
14	Victoria	Australia	-37.8135	144.9631	0	0	0	0	1	1	...	1336	1336	1337	1343	1346	1349	1349	1354	1361	1364
15	Western Australia	Australia	-31.9505	115.8605	0	0	0	0	0	0	...	546	546	546	548	549	549	549	550	551	551
16	NaN	Austria	47.5162	14.5501	0	0	0	0	0	0	...	14873	14925	15002	15071	15148	15225	15274	15357	15402	15452
17	NaN	Azerbaijan	40.1431	47.5769	0	0	0	0	0	0	...	1480	1518	1548	1592	1617	1645	1678	1717	1766	1804
18	NaN	Bahamas	25.0343	-77.3963	0	0	0	0	0	0	...	65	65	72	73	78	80	80	80	80	81
19	NaN	Bahrain	26.0275	50.5500	0	0	0	0	0	0	...	1973	2027	2217	2518	2588	2647	2723	2811	2921	3040

20 rows × 104 columns

	Total cases
Country/Region	
Afghanistan	2171
Albania	773
Algeria	4006
Andorra	745
Angola	27
Antigua and Barbuda	24
Argentina	4428
Armenia	2066
Australia	6766
Austria	15452
Azerbaijan	1804
Bahamas	81
Bahrain	3040
Bangladesh	7667
Barbados	81
Belarus	14027
Belgium	48519
Belize	18
Benin	64
Bhutan	7







- There is pretty significant correlation with healthy life expectancy, GDP percapita, happiness score, and social support
- Interesting when richer country faces more cases and more deaths
- This observation may be caused by that richer country can afford more test and can do have better data collecting system
- So all the deaths are recorded.