Instructions for Analysis

You are given 02 sets of world values surveys. One is for 2010-2014 (wave -6), and the other is for 2017-2021 (Wave 7). Every survey has a questionnaire, codebook and data file. There are a total of six files that are provided to you. For each survey, there are three files as follows:

a. Survey questionnaire
b. Code book
c. Survey responses in R format.

Survey responses 2010-2014

Please open the file titled: Official_Questionnaire_v4_WV6_June2012.pdf and go to question number V84. The question states: How interested would you say you are in politics?

Now open the file titled: Codebook_ WV6_ .pdf and go to v84. This shows how responses are coded in the R file. Please take into account the signs given to numbers.

Open the file titled: WV6_Data_R_v20201117.zip and check the responses.

Survey responses 2017-2020

Please open the file titled: Master_Questionnaire_WVS-7_2017-2020_English (2).pdf and go to question number Q199. The question states: How interested would you say you are in politics?

Now open the file titled: Codebook_Variables_reportWVS_7_.pdf and go to page 67 and look at Q199, which states Interest in politics. This shows how responses are coded in the R file. Please consider the signs given to numbers.

Open the file titled: WVS_Cross-National_Wave_7_rds_v4_0.zip and check the responses.

Task:

Using supervised algorithms - classical, hybrid and quantum, check how much people's views have changed in the two surveys and save the results by analysing survey results. Please check which algorithm gives us better results.

So far, we have analysed how much people's responses have changed from 2010 till 2021 on interest in politics based on two survey reports, which is quite easy.

The difficult task

So far, we have only used survey data to find the difference in attitudes about politics from 2010 to 2020. This does not explain why this change took place. Now, we will carry out an analysis to understand why this change happened.

Instructions:

We need to understand the reasons why there is a change of views in people's attitudes towards politics. As we know, we are looking at two different time periods, i.e. 2010-2016 and 2017-2021. Therefore, we will be doing two different analyses as follows using survey, google video and Twitter data. The first analysis will be from the period 2010-2016, and the second analysis will be from 2017-2021. The procedure will be as follows.

For first analysis 2010-2016

For this analysis, we will compare the results of classical, hybrid, and quantum algorithms using survey data, Google video data and Twitter data. We already have survey data for 2010-2014 that explains people's views on politics.

To obtain google video data, use the following key terms for search on google – use google chrome:

1. Politics
2. People interest in politics
3. Reasons for people's interest in politics
4. Reasons for more people's interest in politics
5. Reasons for less people's interest in politics
6. Reasons for no people's interest in politics

Conduct a different search for each search term and apply the following filters when conducting a google video search; 1) time period range 2010-2016; 2) select videos for analysis that have over one hundred thousand views; c) only select videos from first 20 pages for each search term.

For obtaining Twitter data, use the following Key terms:

1. Politics
2. People interest in politics
3. Reasons for people's interest in politics
4. Reasons for more people's interest in politics
5. Reasons for less people's interest in politics
6. Reasons for no people's interest in politics

Conduct a different search for each search term and apply the following filters when conducting a Twitter search; 1) time period range 2010-2016; 2) select tweets for analysis that have over 1000 re-tweets; c) select only the first 5000 tweets for each search term.

So far, we have gathered survey data, Google video data and Twitter data. We will now use classical, hybrid, and quantum algorithms to compare the results.

Probably we may not be able to apply classical algorithms for three forms of data – you can write an algorithm to see if that works. However, we can process the above mentioned three forms of data using hybrid and quantum ML. So, we may only be comparing hybrid and quantum ML.

Task:

Process all three forms of data in separate supervised classical, hybrid, and quantum algorithms to get results.

1) Record the speed of processing, accuracy, and reliability of the algorithms results.

2) Record the common themes that emerged from the analysis, i.e., causes of less, more or no people's interest in politics.

For the analysis 2017-2021

We will compare the results of classical, hybrid, and quantum algorithms using survey data, Google video data and Twitter data.

We already have survey data for 2017-2021 that explains people's views on politics. To obtain google video data, use the following key terms:

1. Politics
2. People interest in politics
3. Reasons for people's interest in politics
4. Reasons for more people's interest in politics
5. Reasons for less people's interest in politics
6. Reasons for no people's interest in politics

Conduct a different search for each search term and apply the following filters when conducting a google video search; 1) time period range 2017-2021; 2) select videos for analysis that have over one hundred thousand views; c) only select videos from first 20 pages for each search term.

For obtaining Twitter data, use the following key terms:

1. Politics
2. People interest in politics
3. Reasons for people's interest in politics
4. Reasons for more people's interest in politics
5. Reasons for less people's interest in politics
6. Reasons for no people's interest in politics

Conduct a different search for each search term and apply the following filters when conducting a twitter search; 1) time period range 2017-2021; 2) select tweets for analysis that have over 1000 thousand re-tweets; c) select only the first 5000 tweets for each search term.

So far, we have gathered survey data, Google video data and Twitter data. We will now use classical, hybrid, and quantum algorithms to compare the results.

Probably we may not be able to apply classical algorithms for three forms of data – you can write an algorithm to see if that works. However, we can process three forms of data using hybrid and quantum ML. So, we will only be comparing hybrid and quantum ML.

Task:

Process all three forms of data in separate supervised classical, hybrid, and quantum algorithms to get results.

1) Record the speed of processing, accuracy, and reliability of the results of algorithms.

2) Record the common themes that emerged from analysis, i.e., causes of less, more or no interest in politics.