First Assignment (2025-26, Term 2)

In this assignment, you need to apply basic Python skills, including sub-setting and visualization to analyze the World Values Survey (WVS) Wave 7 data. You need to select the rows on Hong Kong, and then select some variables to create a new data frame. Here are the step-by-step instructions:

1. Import all the libraries and packages for analysis and visualization
2. Add a new heading as "Part I: importing data", and do the following: import the WV7_Data, the name of the imported data as "data_original", and check the first ten rows (you need to download the data from the WVS site to your desktop)
3. Create a new data frame called "data_HK" by selecting only the rows of the 'data_original' where the country code (variable name is "B_COUNTRY") is "344" (*this is the code for HK). Check the first ten rows.
4. Create a new data frame called "data_HK_politics" by selecting following columns ("Q71": confidence in government; "Q72": confidence in political parties; "Q73": confidence in parliament; "Q74": confidence in civil service", "Q112": perception of corruption; "Q121": attitude to immigrants; "Q164": Faith in God; "Q260": gender). Check the first ten rows.[1]
5. Add a new heading as "Part II: exploring data", and do the following: Explore the data_HK_politics using describe() function, showing distribution of values for each variable.
6. Explore the data_HK_politics using Matplotlib's histogram to visualize all variables.
7. Draw a boxplot of confidence in government in HK (variable name: Q73) segmented/grouped by gender, to show the difference of confidence in the government between male and female HKers.
8. Calculate the correlation matrix of the data_HK_politics; and draw a heatmap using seaborn library (you may need to import seaborn as sns).[2]
9. Save or download the code file as both "ipynb" and "html" version for your record, and submit the html version to Moodle by Feb 9, 2026, 23:59.

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[1] For the first four steps, see https://github.com/eagoyang/GOV3219-Intro-to-Computational-PoliSci/blob/main/Part%20I%20Python%20Basics%20and%20Visualization/1%20Data%20and%20data%20selection.ipynb

[2] https://github.com/eagoyang/GOV3219-Intro-to-Computational-PoliSci/blob/main/Part%20I%20Python%20Basics%20and%20Visualization/3%20Exploratory%20Data%20Analysis.ipynb