UNIVERSITY COLLEGE LONDON

DEPARTMENT OF POLITICAL SCIENCE/SCHOOL OF PUBLIC POLICY

POLS0010
Data Analysis

ESSAY QUESTIONS 2021–2022 (Part 1, TERM 1)

Guidelines for Completing and Submitting POLS0010 Essay

- Read the below guidelines to avoid losing unnecessary marks.
- The assessment is due on 10th January 2022. Please follow all designated Department of Political submission guidelines. THESE MAY BE DIFFERENT TO THOSE OF YOUR HOST DEPARTMENT. The submission guidelines are available on the Moodle page for this module. The word limit is 1,500 words.
- This is an assessed piece of coursework for the POLS0010 module; collaboration and/or discussion with anyone is strictly prohibited. The rules for plagiarism apply and any cases of suspected plagiarism of published work or the work of classmates will be taken seriously.

Assessment Part 1

This assessment tests your ability to think about the ways data can be processed and analysed.

The task is to write a simple function in R. The function itself should perform one or a number of spatial analysis routines, and produce an output file and/or visualisation of a dataset we have used in class or that you have sourced yourself. You should submit the code as part of the appendix. The marker may request original R files from the student if there are concerns about plagiarism (this is done anonymously via the student office) so all original files should be kept. Examples will be provided in class.

Things to consider:

1. The final function should address a clear problem and turn the raw data into information.
2. You may wish to integrate the plotting of data into the function but this may not always be appropriate.
3. The function should offer a number of clearly explained parameters for the user to adjust if they wish to experiment with a range of results.

The accompanying write-up should take the form of a manual for the function's use. It should include:

1. A flow diagram to demonstrate the sequence of steps in the function.
2. Explanation of the R object format required – such as what variables are required.
3. A worked example of the function in action.

You may also wish to include:

1. The need for such a function to be written and rationale for your approach.
2. A description of the data used to demonstrate the function.

3. The scientific basis and brief description of the analysis implemented.
4. Testing you have performed to ensure the outputs are reliable.
5. Potential applications of the function beyond those demonstrated.
6. Limitations.

The function itself is worth 30 points, with 20 points available for the manual.

Some more on the mark scheme

You will have a mark out of 50 (the other 50 come from Part 2) and marks will be awarded as follows:

1. Function Utility (10 marks)

The final function should address a clear problem and turn raw data into information.

2. Function Complexity (10 marks)

How complex is the function? Does the code replicate what has been taught in lectures or is there clear evidence of significant additional research?

3. Function Clarity (10 marks)

Is the function and accompanying R code easy to follow with clearly defined parameters?

4. Manual (15 marks)

Requires a flow diagram to demonstrate the sequence of steps, explanation of the R object format required and the variables, a worked example of the function in action.

5. Manual Presentation (5 marks)

Quality of writing, graphs and figures.

I have attached two examples to help clarify this - not the R code has been removed. These achieved 2.1 classifications.