Resit Project: Creation of a R package

Due date: Wednesday 21st of December at 5pm

This project is marked out of 100. Please upload to Brightspace the completed Assessment Submission Form, one zipped file for your package (e.g, `PackageName_0.1.0.tar.gz`) and any other relevant files. For full marks, please ensure your code is clear and well-commented.

Creation of an R Package

Create an R Package using a dataset of your choice. *You must <u>not</u> use a built-in R dataset or a dataset you used previously in STAT40830 for the project or the 'Maths Ed' dataset used in the course.* If you wish you can make use of the following websites to find an appropriate dataset:

- The Irish government data repository: https://data.gov.ie/
- Google dataset search: https://datasetsearch.research.google.com/

Give your package an appropriate name and consider the overall aim of your package. The guidelines for the package are as follows:

1. Include at least four functions in separate R script files

   (a) At least one function should relate to data manipulation

   (b) At least one function should use ggplot2

2. Include an interactive plot

3. Incorporate a Shiny app

4. Include appropriate documentation for the package

5. The package should be built and checked with 0 errors, 0 warnings and 0 notes (some notes and warnings may be system-dependent so certain exceptions may be accepted on this point)

Grading

The package should show mastery of the material from the module and have cohesive documentation. R code/packages not seen in the module may be used. The project will be marked out of 100 according to the following criteria:

1. (30 marks) Technical parts of the code

2. (10 marks) Quality of interactive graphics (e.g., ggiraph)

3. (10 marks) Quality of graphics

4. (5 marks) Code is commented (succinctly)

5. (5 marks) Incorporation of a Shiny app

6. (25 marks) Non-technical aspects (e.g., documentation)

7. (15 marks) Usability of the package (e.g., package compiles, how easy it is for a user to understand, navigate and use the package).

Plagiarism

While you are encouraged to ask about the module material, this project should be completed individually. Any student who plagiarises will receive a 0 mark. The UCD Plagiarism Policy applies to all students. This can be consulted at: `http://www.ucd.ie/governance/resources/policypage-plagiarismpolicy/`.

Notes

If you are concerned about your choice of dataset, please email the dataset to me (emma.howard@ucd.ie). Please note that the assignment marks are for incorporating a Shiny app (i.e., you can create a very basic app to incorporate rather than spending time on developing this component). After the submission date, you may wish to share your code from this module (e.g., for the Shiny app or the R package). If you share the code online, it is important to reference the dataset used etc.