Case Study – Influenza Vaccination Rate Modelling

Due: TBD

General Description: Submit a link to a repository including all inputs and outputs necessary for completion of project and creation of deliverables.

Why am I doing this? Case studies are a great way to assess different skills and techniques gathered throughout the Data Science curriculum. By combining knowledge of datasets, analysis, modelling, and gathering key insights, students can generate concrete deliverables and takeaways from all kinds of data in a real world scenario.

- **Course Learning Objective:** Analyze time scale data using ARIMA modelling

What am I going to do? For this assignment, you will be reading through the contents of this folder to gain context of the problem and the necessary information required to develop a sound analysis. Be sure to thoroughly read through this rubric and the hook document to provide a full context for the type of data to analyze and the overall objectives of the analysis. You will have the opportunity to analyze data from the past, as well as creating a model to predict how the data of the past will impact future numbers.

Tips for success:

- **Be thorough.** Make sure to capture all the information available before beginning your analysis.
- **Remember the end objective.** Try not to get caught up in the details of the model, remember to keep the bigger picture in mind while simplifying each step if necessary.
- **Talk to the instructors.** This assignment includes modelling techniques that you may not have practiced in the past, reach out to your instructors if anything is unclear.
- **Have fun!** This project should not cause excessive levels of stress. If anything is unfamiliar to you, remember you have a network of data science professors and students where you can seek out support.

How will I know I have Succeeded? You will meet expectations on Case Study – Influenza Vaccination Modelling when you follow the criteria in the rubric below.

Spec Category	Spec Details

Formatting	• Repository: An online folder on GitHub.com containing the materials necessary for the conclusion of the project.
	  ○ Scripts
	  ○ Data
	  ○ Outputs
	  ○ README file

Scripts	• Goal: This folder contains all the source code for your project. • Include all the scripts you used. Try to name each script according to the order it needs to be executed to reproduce the results.

	● All script files should include header comments at the beginning of a script to provide information that anyone working with or executing the script should be aware of. Throughout all your scripts, you should include copious comments explaining what each command or sequence of commands accomplishes and what the purpose is
Data	● Goal: This folder contains all of the data for this project. ● A Data Appendix file as a PDF, which will include text that you type, as well as tables, figures, and other descriptive statistics. ○ This file should be organized in sections, with a section for each dataset analyzed. ○ Each section should begin with a statement of what the unit of observation is--that is, it should explain what kind of object each row of the data file represents. ○ After that, you should include a subsection for each variable in the analyzed dataset.
Outputs	● Goal: This folder contains all of the output generated by your project, e.g. figures, tables, etc. ● Use informative names for your files.
README File	● Goal: This file serves as an orientation to everyone who comes to your repository, it should enable them to get their bearings. ○ Use markdown headers to divide content. ○ Make an H2 (##) section explaining the contents of the repository ● Section 1: Software and platform section ○ The type(s) of software you used for the project. ○ The names of any add-on packages that need to be installed with the software. ○ The platform (e.g., Windows, Mac, or Linux) you used. ● Section 2: A Map of your documentation. ○ In this section, you should provide an outline of folders and files within your repository. ● Section 3: Instructions for reproducing your results. ○ In this section, you should give explicit step-by-step instructions to reproduce the Results of your study.
References	● Include all references used that were not already given in the reference material in an individual reference file.

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