

# MT5000 Data Analytics & Visualisations

## Instructions for the Assignment 2 – Statistical Report

### Context

Micheál Martin has been impressed by your Tableau dashboard comparing the situation of Ireland and 9 other countries on the COVID-19 pandemic. The Taoiseach all the National Public Health Emergency Team (NPHE) has decided to promote your position as Senior Data Analyst.

### Task

NPHE asked you to conduct an academic research with statistical analyses to understand the factors behind the situation of Ireland and 9 other countries regarding the COVID-19 data using the data included in the document “df\_country\_data.csv”<sup>1</sup> that has been sent to you by email for the previous assignment. NPHE expects you to publish an academic research paper presenting your results.

For your statistical analyses, you can also use the files “df\_country\_metadata.csv” and “df\_global.csv” that has also been sent to you for the previous assignment.

Your academic research paper should investigate **between 3 and 4 hypotheses**.

Write an academic research paper, no more than **5 pages long**, including:

- A short **abstract**,
- A short **literature review** with no more than 5 references which ends with your hypotheses,
- A **method section** presenting your data. Your method section should present how the hypotheses are tested with the corresponding model representation and equation,
- A **result section** including descriptive statistics and inferential statistics,
- A **discussion and conclusion** section which examines the hypotheses and their results,
- A **reference section** listing the academic papers used in your document.

The format of your academic research paper should **follow the style from one of three templates** proposed (see “template\_1.pdf”, “template\_2.pdf”, and “template\_3.pdf” attached).

This research paper can be based on the **same story that the one used in your previous tableau dashboard or be based on a completely different story**.

### Assessment Criteria

Obtaining statistically significant results (i.e.,  $p < 0.05$ ), rather than not significant results, **will not lead to a higher mark**. The only assessment criteria are the following:

- **Accuracy of variables, hypotheses, model, and equation description,**
- **Conformity of statistical analyses and results’ interpretations,**
- **Relevance of Tables and/or Figures,**
- **Overall presentation style.**

### Report Submission

1. **On the MT5000 Loop page, section Assignment.**
2. **In a .pdf file.**
3. **By Wednesday April 14<sup>th</sup>, 2021.**

**Note, any page after the 5<sup>th</sup> page will not be assessed (whatever it is in the appendix or in the main document).** Each data attributed to students are unique and will prevent copy-paste of results from another dataset attributed to another student.

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<sup>1</sup> Taken from <https://ourworldindata.org/coronavirus-source-data>