



# MONASH University

## Assessment

Faculty of Information Technology

FIT5125

Research Methods for IT

Summer B 2025

### Assignment 2

**Value**

This assignment is worth **40%** of the total marks for FIT5125

**Assignment due date**

Wednesday, 19 February 2025 at 4.30pm

**Submission method**


Submit to Moodle:


- three PDF documents, one for each of the three tasks (A, B and C).

# Assignment Criteria

<b>A: Telling a Data Story</b>	<b>B: Working with Hypotheses</b>	<b>C: Communicating Research</b>
Weighting: 20 marks	Weighting: 20 marks	Weighting: 20 marks
See page 3.	See page 5.	See page 7.

This is an individual assessment; it must be your own work and expressed in your own words.

 *A marking guide is available on Moodle.*

 *There are specific requirements for file names on your submission (see the instructions for each task).*

## **Assessment rules:**

1. Note that plagiarism detection procedures may be applied to each submission. See the University rules and regulations regarding plagiarism and resulting penalties. Any case of plagiarism detected will mean automatic failure of the entire assignment. Note that even where Turnitin reports a high similarity score, this may simply be the result of text that is part of the original question or a correctly referenced quotation (such cases are not plagiarism).
2. Late submissions will incur a penalty of 5% per day, see:  
<https://publicpolicydms.monash.edu/Monash/documents/1935752>
3. Submissions should follow the instructions for each task, described under "What to Submit".
4. Monash policy on Special Consideration is available at:  
<https://www.monash.edu/exams/changes/special-consideration>
5. We aim to mark and return work within 10 working days of submission.

# Task A (Topic 8)

## "Telling a data story"

Telling a coherent story with your data is a core part of the research process. Statistics can be used in myriad ways to describe any given dataset, so it is important to use the appropriate measures and visualisations to enrich and provide context to a narrative of your data. Although in a perfect world we would ask a question and then design a process to capture data that answered that question, in reality we often have to make use of 'secondary' data, or data captured previously.

In this assignment, you will tell a story about some public data using the methods you have learned about.

### Complete the following:

1. Identify a data source from one of the following open data repositories:
  - <https://www.data.vic.gov.au/>
  - <https://www.abs.gov.au/statistics/>
  - <https://uis.unesco.org>
  - <https://ec.europa.eu/eurostat/databrowser/>
  - <https://opendata.cityofnewyork.us/>
2. Formulate a research question that you want to ask of this data - for example "What is the relationship between the value of imported goods and cost of living?" (**max. 50 words**)
3. Select 2 appropriate descriptive metrics (e.g. mean) that tell you something about the data, and calculate those metrics on your selected data, using a tool of your choice. Present the fields from the dataset used and the resulting calculated values (**max. 50 words**)
4. Create an appropriate visualisation to help explain what you are saying about the data. The visualisation should be fully annotated.
5. Write a short narrative description of your findings as they relate to your research question, referencing both your chosen metrics and visualisation. (**max. 250 words**)

### What to Submit

1. A PDF document, named "STUDENT-ID-Assignment-2-Task-A.pdf" containing your response to the assignment.

### How Much to Write

There is a strict word limit for your answers detailed above. For submission over the specified word limits, only the parts of answers within the word limit will be awarded marks.

### What to Know

- If you have any questions about the assignment, you should submit them as a public post to the Ed forum (under the sub-category "Assignments") so that all students have access to the question and CE or admin tutor's response.

- This is an individual exercise that forms part of the formal assessment for the unit, you must therefore work alone and follow Monash University's policies, procedures and regulations relating academic integrity, plagiarism and collusion (see Moodle).
- As this is a formal assessment tutors are not allowed support to directly, however, they can provide feedback on any studio activities (during the studio).
- The aim of this assessment is to evaluate your understanding of basic statistics, and to assess your ability to correctly apply basic statistical computations.

## Task B

### "Working with Hypotheses"

In this exercise you will formulate a hypothesis, prepare a plan of your study (including statistical testing) and justify it, including the potential limitations of it. Consider the topic of **what makes the moderation guidelines for a Facebook group effective?** Imagine you are asked to develop this research area further.

**Complete the following:**

1. Propose a hypothesis. It should be something you can realistically test using one or more of the statistical tests covered in this course. It can concern any subtopic or natural phenomena which relates in some way to the topic: artificial intelligence and data privacy. **(max. 50 words)**
2. Write down the null hypothesis. **(max. 50 words)**
3. Write down the independent and dependent variables as well as at least three confounding variables. **(max. 50 words)**
4. Imagine you had a budget of up to 1000AUD (in addition to up to 100 hours of your time to conduct the study). Explain what data you will collect to investigate this hypothesis and how you would obtain the data in a practical fashion. **(max. 100 words)**
5. What statistical test(s) do you expect to conduct to test your hypothesis. Provide your assumptions of the data and why such tests(s) are appropriate. **(max. 150 words)**
6. What are the limitations of your study? Write a paragraph that explains these limitations as well as potential future investigations you might conduct. **(max. 200 words)**
7. Present a different narrative that could have been presented from your results, highlighting how the data needs to be selected, methods changed, or process otherwise manipulated to support this different interpretation. **(max. 50 words)**

#### What to Submit

1. A PDF containing your answers to the questions named "STUDENT-ID-Assignment-2-Task-B.pdf".

#### How Much to Write

There is a strict word limit for your answers detailed above. For submission over the specified word limits, only the parts of answers within the word limit will be awarded marks.

#### What to Know

- If you have any questions about the assignment, you should submit them as a public post to the Ed forum (under the sub-category "Assignments") so that all students have access to the question and CE or admin tutor's response.
- This is an individual exercise that forms part of the formal assessment for the unit, you must therefore work alone and follow Monash University's policies, procedures and regulations relating academic integrity, plagiarism and collusion (see Moodle).
- As this is a formal assessment tutors are not allowed support to directly, however, they can provide feedback on any studio activities (during the studio).

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# Task C

## "Communicating Research"

Select **one** of the four videos provided.

Your task is to examine this video, deconstruct the intentions of creators using your understanding of good practice in research communication, and explain the choices that creators have made.

### Task 1.

- What are the assumptions that you believe the authors have made about the audience?
- Justify the assumptions that you believe the authors have made about the audience.
- Elaborate on what the audience is looking for.
- Elaborate on what the authors aimed to persuade the audience to think/do/say.
- Elaborate on what emotions did the authors intend to evoke in the audience while watching this video.

Make sure to support each elaboration with at least one corresponding element from the video, including the time interval when it occurs in the video. **(max. 500 words)**

### Task 2.

- Decompose the a section of the video into 8-10 beats.
- Describe each beat by populating the Assignment 2 Template. Specific instructions are provided in the template (the text in the table should not exceed **1000 words**).

### Task 3.

- Evaluate the content, narrative, and visuals in the video to determine how well they communicate the research project.
- Identify any elements of content, narrative and visuals that you found confusing, ineffective, redundant, or overwhelming.
- Elaborate on how each of these elements detract from the video's overall clarity and effectiveness in conveying the key message.
- Finally, propose specific suggestions on how to address these issues to improve the video's overall quality. **(max. 500 words)**

#### What to Submit

1. A pdf file named "STUDENT\_NAME-ID-Assignment2-Task-C.pdf" (Note: make sure also to include the template you populated and state clearly which video you selected)

#### How Much to Write

Word limit does not include references. Please make sure to comply to the strict word limits.

#### What to Know

- If you have any questions about the assignment, you should submit them as a public post to the Ed forum (under the sub-category "Assignments") so that all students have access to the question and CE or admin tutor's response.
- This is an individual exercise that forms part of the formal assessment for the unit, you must therefore work alone and follow Monash University's policies, procedures and regulations relating academic integrity, plagiarism and collusion (see Moodle).
- As this is a formal assessment tutors are not allowed support to directly, however, they can provide feedback on any studio activities (during the studio).
- The aim of this assessment is to evaluate your knowledge about communicating research.