



MONASH University

Assessment

Faculty of Information Technology

FIT4005 / FIT5125

Research Methods for IT

Semester 2 2023

Assignment 3: Weeks 7, 8, & 9

Submission

Post-studio Exercises for Weeks 7,8 & 9

Value

This assignment is worth **20%** of the total marks for FIT4005 / FIT5125

Assignment due date

Thursday, 5-October-2023 at 11.55pm (Week 10)

Submission method

Submit to Moodle:

- a separate PDF for the exercises for Week 7, 8 & 9.


Assignment Criteria

This assignment comprises the post-workshop exercises for Weeks 7,8 & 9.

Week 7 Qualitative Analysis	Week 8 Descriptive Statistics	Week 9 Inferential Experiments
Weighting: 20 marks	Weighting: 20 marks	Weighting: 20 marks
See page 3.	See page 4.	See Page 5.

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

 *Marking guides to help you position your work are available on Moodle.*

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

Assessment criteria:

1. The following criteria will be used to determine the score for the assignment:
 - Content and completeness of tasks
 - Clarity and relevance of content
 - Level of critical analysis
 - Logical structure and organization of ideas
 - Use of references (where appropriate)
 - Format, grammar, spelling etc.
2. 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.
3. Late submissions will incur a penalty of 5% per day.
4. Submissions (Word and PDF) should include:
 - Student's name and student ID number
 - Tutor's name and studio name
5. Monash policy on Special Consideration is available at <https://www.monash.edu/exams/changes/special-consideration>
6. In line with Monash policy we aim to mark and return work within 10 working days of submission where possible.

Assessed Exercise (Week 7)

"Qualitative Analysis"

We have conducted three interviews in which people discuss

Student perceptions of generative AI tools in a university setting

These are available to download on Moodle.

Task 1: Thematically analyse the transcripts of all three interviews and derive THREE themes (groups of codes). Write down your theme names, and the names of the associated codes, using the Week 6 template.

Remember the order in which analysis was carried out in the workshops: i) thoroughly read the transcripts, ii) code (and refine) your codes, iii) group the codes into interesting themes.

Task 2: For each code you included in Task 1, provide a description of the code and at least 2 illustrative quotes from the transcript. Use the Week 6 template.

Limit your description of each code (not including the illustrative quotes) to no more than 50 words.

Task 3: Write a description of each theme included in your response to Task 1. Your description should include a justification for its inclusion, and an explanation of how the theme captures something interesting about participants perceptions. Use the Week 6 template.

Limit your description of each theme to no more than 150 words.

What to Submit

1. A PDF based on the week 7 submission template, filled in with your response named "STUDENT-ID-Week7.pdf"

How Much to Write

There are strict word limits, as described above. For submissions that include descriptions over this length only the words within the limit will be awarded marks.

What to Know

- This is an individual exercise that forms part of the 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).
- Tutors may not provide support to you when you are completing the exercise, but they will help clarify your understanding of the question.
- Tutors will provide feedback on any studio activities and this should be of help to you in completing the exercise.
- The aim of this assessment is to evaluate your understanding of qualitative analysis, and your skills in using thematic analysis to analyse real focus group data.

Assessed Exercise (Week 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 an open data source from one of the following open data repositories:
 - <https://data.humdata.org/>
 - <https://data.gov.au/home>
 - <https://www.dosm.gov.my>
 - <https://data.go.id/topic-detail>
2. Formulate a research question that you want to ask of this data - for example "What is the relationship between a persons age and if they carry an ID card?" (**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 a reader understand what you are saying about the data, which is fully annotated.
5. Write a short narrative description of your findings as they relate to you research question, referencing both your chosen metrics and visualisation. (**max. 150 words**)

What to Submit

1. A PDF document, named "STUDENT-ID-Week8.pdf" containing the responses to the assignment and a CSV or JSON file containing the dataset you used.

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

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- Tutors may not provide support to you when you are completing the exercise, but they will help clarify your understanding of the question.
- Tutors will provide feedback on any studio activities and this should be of help to you in completing the exercise.
- The aim of this assessment is to evaluate your understanding of basic statistics, and to assess your ability to correctly apply basic statistical computations.

Assessed Exercise (Week 9)

"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 the survey that you participated in during the unit. 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 topic or natural phenomena which relates in some way to the survey topic. **(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-Week9.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

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- Tutors will provide feedback on any studio activities and this should be of help to you in completing the exercise.
- The aim of this assessment is to evaluate your understanding of basic statistics, and to assess your ability to correctly apply basic statistic computations.

