

TDA3121 Data Analytics Fundamentals

Final Assessment: Case Study (40%)

Students are required to explore, conduct and present a case study of Data Analytics on **ANY** dataset with **ANY** Data Analysis Tool.

- You are expected to include all applicable data analytics concepts in this case study.
- You are required to use at least **ONE** data set of more than 300 data points. You need to explain why you chose the data set and the background of this dataset you are using. Provide information on the data collection process and sample screenshots of the data (those relevant to your analysis).
- You are required to use at least **ONE** data analytics software for this analysis.
- You are required to include the screenshot for your supporting data visualisation on the corresponding analysis you are doing.
- Clearly identify and list out the big question(s) you are trying to answer based on your data analytics work. Your analysis should reflect the clear relevance of the data visuals to the answers to the big question(s).
- Perform general descriptive analysis of the dataset to briefly explain general patterns of the data and a general overview of the sample.
- Clearly explain each step you use in performing the data analytics. Always refer back to your big question(s) when you are processing your data for the analysis.
- Articulate your findings after each analysis and discuss your findings based on the perspective of the stakeholder(s) of your big question(s). What are the possible cause(s) of the finding(s)? What are the implications? What are your suggestion(s) for improvement(s) or rectification(s) of the situation(s)?
- Suggest predictive model(s) that can be logically proposed to be used for the analysis relating back to your big question(s).

Hint: You are highly recommended to go through Chapter 14 of the textbook before your start this case study

Grouping

You are required to work in a team (**minimum/maximum of 4 students in SAME LAB section**) for this case study.

Sample data set from Open Data Sources:

<https://www.freecodecamp.org/news/https-medium-freecodecamp-org-best-free-open-datasources-anyone-can-use-a65b514b0f2d/>

Evaluation

Report: 25%

Presentation: 15%

Submission Due Date

Please submit your final report by **21st September 2023**.

Report Structure

The final report should consist of 5 sections as follows:

1. Introduction
2. Methodology
3. Data Set
4. Data Analysis and Results
5. Conclusion

Presentation

All members are required to present the project in **NOT MORE THAN 10 minutes** on Week 7.

Important:

1. Must be an original work. Strictly NO copying.
2. No late submission is allowed.
3. **MUST use the cover page that has been prepared for you in this document for your report.**
4. Fill up the required details on the cover page.

Faculty of Information Science and Technology (FIST)

TDA3121 Data Analytics Fundamentals

Trimester 3 2022/2023

Case Study (40%)

Case Study Title:

Due date: 21st September 2023

No	Student Name	Student ID	Academic Program	Tutorial Session
1				
2				
3				
4				

MARKING RUBRICS (40%)

TASKS		MARKS	
Report (70%)	Introduction		5
	Methodology		20
	Data Set		10
	Data Analysis and Result		20
	Conclusion		5
	Format		5
	References		5

Presentation (30%)	Clarity		10
	Presentation Slides		10
	Teamwork		10
		Total	/100

*****Marks Indication:**

Component	Excellent	Good	Average	Poor	Very Poor
Introduction (5)	5	4	3	2	1-0
	A well-written executive summary of the project.	An adequate introduction to the project report.	Student has performed moderately work resulting in typical results in the specific task.	Missing section or poorly written introduction to the project report.	Student is not able to achieve the specific task.
Methodology (20)	20-17	16-13	12-8	7-4	3-0
	Systematic and clear explanation of the methodology is provided and related to the project.	Methodology of the project provided but not related to the project.	Student has performed moderately work resulting in typical results in the specific task.	Missing section or irrelevant methodology provided.	Student is not able to achieve the specific task.
Data Set (10)	10-9	8-7	6-5	4-3	2-0
	Comprehensive data set from a reliable source with explanation of the attributes and data file.	A data set from a reliable source but lacks depth and explanation of the attributes; and data file provided.	Student has performed moderately work resulting in typical results in the specific task.	Data set from unknown source; no data file or explanation provided.	Student is not able to achieve the specific task.
Data Analysis and Result (20)	20-17	16-13	12-8	7-4	3-0
	Provide analysis and discuss the results using methods introduced in this course.	Provide analysis but lacks discussion on the findings/results.	Student has performed moderately work resulting in typical results in the specific task.	Only descriptive statistics/charts provided with no analysis or discussion.	Student is not able to achieve the specific task.

Conclusion (5)	5	4	3	2	1-0
	Able to conclude the findings with supporting evidence.	Provide conclusions but lacks supporting evidence.	Student has performed moderately work resulting in typical results in the specific task.	Generally conclude the work done.	Student is not able to achieve the specific task.
Format (5)	5	4	3	2	1-0
	Error-free formatting based on MMU guidelines.	Formatting based on MMU guidelines but have minimal errors.	Student has performed moderately work resulting in typical results in the specific task.	Report is not in appropriate format and have many errors.	Student is not able to achieve the specific task.
References (5)	5	4	3	2	1-0
	Appropriate list of references. Error-free reference formatting based on MMU guidelines.	Reference formatting based on MMU guidelines but have minimal errors.	Student has performed moderately work resulting in typical results in the specific task.	Reference is not in appropriate format and have many errors.	Student is not able to achieve the specific task.
Clarity (10)	10-9	8-7	6-5	4-3	2-0
	The presentation is original, creative, clear and support the project.	The presentation is sufficient to present the main idea of the project.	Student has performed moderately work resulting in typical results in the specific task.	The presentation lacks important information on the idea; further interrogations was required to understand the idea.	Student is not able to achieve the specific task.
Presentation Slides (10)	10-9	8-7	6-5	4-3	2-0
	The presentation was interesting and with required information on the work done.	The presentation includes all Important information on the project.	Student has performed moderately work resulting in typical results in the specific task.	The presentation is not interesting and lacks information.	Student is not able to achieve the specific task.
Teamwork (10)	10-9	8-7	6-5	4-3	2-0
	The presentation shows adequate planning and effective communication and teamwork among members.	The presentation was prepared according to plan with adequate communication and teamwork among members.	Student has performed moderately work resulting in typical results in the specific task.	The presentation was dull and shows lack of planning and poor communication and teamwork among members.	Student is not able to achieve the specific task.

(TO BE FILLED BY STUDENTS)

DECLARATION:

We agree that all members deserve equal marks for this project. We confirm that we have contributed equally to produce an original report in our best effort.

Write down your ID (clearly) and sign (by all members):

Student ID: _____ Signature: _____

Student ID: _____ Signature: _____

Student ID: _____ Signature: _____

Student ID: _____ Signature: _____

Student ID: _____ Signature: _____

Declaration by Group Leader

I hereby declare that all group members' names are correctly included in the above section. I hold a copy of this assignment which I can produce if the original is lost or damaged. I certify that not part of this assignment has been copied from any other student's work or from any other source except where due acknowledgement is made in the assignment/project/etc.

Group Leader's Signature: _____

Group Leader's Name: _____

Group Leader's ID: _____

Date: _____

Group Member's Declaration

(Each group member, including the group leader, must individually fill up and submit this form. This form has to be attached together with the assignment/ project submission.)

Group member's name: _____

Student ID: _____

For the purpose of completing this assignment, I have performed the following tasks:

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

I hereby declare that I have assessed the final submission and I take full responsibility should there be any inaccuracies, incompleteness, omissions, delays or non-submission.

Group member's signature: _____

Group member's name:

Group member's ID: _____

Date: _____

Group Member's Declaration

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[illegible]

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