

Assignment Project Exam Help

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Code



- [Show All Code](#)
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MATH1155 Project Exam Help

Semester 2 2018

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Aim

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- The aim of the 2 Projects is to give you an authentic experience of producing reproducible statistical reports using real data.
- They are purposely open-ended to expose you to the joys and challenges of problem solving with data.
- The set of 2 Projects is cumulative, allowing you to develop and consolidate 5 vital graduate qualities: statistical thinking, computational skills, curiosity, communication and collaboration.

1 Project2 | Reproducible Research on given large dataset

You have been given a large dataset from a reputable source.

Main Presentation

1. Present an interesting and informative statistical report on the data, of no more than 8 minutes,

showcasing everything you have learnt in MATH1115.

- *Submission: Submit a .html, produced in .Rmd.*

Interrogation

2. Submit an interrogation of one research question from another group's report.

- *Submission: Submit a .html, produced in .Rmd.*

Class Discussion

3. Discuss a media or research article relevant to the research question from the other group's report.

Note: You can chose to complete this project in a team of 2-4 students OR individually.

2 Dataset

The following data is sourced from the Sydney Institutional Analytics and Planning (IAP), with ethics permission and approval by the DVC (Education) Prof. Pip Pattison.

The data sets show anonymised student grades for 14 junior Maths units sliced across a number of different attributes, which have been detailed in the accompanying data dictionary.

A standard and advanced data set has been produced: both are exactly the same except the standard set has aggregated counts and the advanced set has a table "student ID" to allow correlations between units to be obtained.

Data links

- [Standard](#)
- [Advanced](#)
- [Data Dictionary](#)

3 Tips for your interrogation

This interrogation will be a little different to what you did in Project1, as you are all using the same dataset. Please read the tips below carefully.

- During the presentations, pick one group/individual and note down 1 of their research questions which is different from yours.
- Redo this research question in your own way. Have you answered this same research question in the same way or an alternate way? Do you agree with the other group's conclusions? Why/why not?
- Write and submit your report.
- Select one interesting article (research or media) to discuss during the Project2 Live Interrogation

class.

4 Marking Criteria 20%

4.1 Step1 - Main Presentation 15%

Quality	Level1	Level2	Level3
Dataset			
Classification	Some variables	Most variables	All variables
Source	Identified	Explained	Assessed
Stakeholder(s)*	Identified	Explained	Assessed
Domain knowledge	Basic	Moderate	Excellent
Exploring Data			
Number of Research Questions	1	2	3+
Use of ggplot	Basic	Moderate	Excellent
Conclusions	Simple	Moderate	Excellent
Modelling Data			
Number of Research Questions	1	2	3+
Use of Linear Model	Basic	Moderate	Excellent
Decisions about Data			
Number of Research Questions	1	2	3+
Use of Chi-squared Test	Basic	Moderate	Excellent
Use of Regression Test	Basic	Moderate	Excellent
Communication: Submitted Report			
Use of language	Not all clear	Mostly clear	Completely clear
Communication: Presentation **			
Speaking	Not clear	Mostly clear	All clear

Quality	Level1	Level2	Level3
Eye contact	Basic	Moderate	Excellent
Timing	Rushed	Moderate	Well-rehearsed
Focused on Executive Summary	-	-	Yes
Response to Live Interrogation	Basic	Moderate	Excellent
Motivation	Basic	Moderate	Excellent
Interesting	Basic	Moderate	Excellent
Total			60

Notes:

- *You may choose different stakeholders for different research questions, as appropriate.
- **You do not need to present your full report live. Pick your most interesting discoveries to present only focused on the executive summary.

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4.2 Step2 - Interrogation 5%

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Quality	Level1	Level2	Level3
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Other group's report

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Reproduce 1 research question (different to your own)	Basic	Moderate	Excellent
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Assess conclusion of other group	Basic	Moderate	Excellent
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Find a related journal article	Basic	Moderate	Excellent
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Find a related media article	Basic	Moderate	Excellent
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**Communication:
Submitted
Report**

Use of language	Not all clear	Mostly clear	Completely clear
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Quality	Level1	Level2	Level3
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Communication: Class Discussion			
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Summarises an insight from a related journal or media article	Basic	Moderate	Excellent
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Total		18	
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