Assessment Brief

CA2 – Data Visualisation

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| Module Name | Lecturer Name |
| Creative Coding 2 | Catherine Noonan |
|  | |
| Title of Brief | |
| CA2 – Data Visualisation | |
|  |  |
| Percentage of Overall Grade | 20% |
| Date handed out | 18/02/2022 |
| Due date | 11/03/2022 |
| Individual or Group | Individual |

Description

**The Minimum Intended Module Learning Outcomes are:**1. Identify and describe the role of statistics in the evaluation and classification of data.  
2. Demonstrate a range of data visualisation methods, using OOP programming principles  
and using array methods to filter and manipulate data.  
3. Apply the appropriate statistical calculations to a dataset and Implement a visual output  
to evaluate the data

This assessment will primarily assess the MIMLO 1 & 3.

The assessment is divided into 2 parts:

**Part (a):**

In class labs and challenges.

**Part (b):**

**Summary:**

Produce at least 2 graphs based on one dataset of your choice and an accompanying report.

**Details:**

**(1) Visualisation:**  
Choose one relevant data set. Note that there are many data sets publicly available – see ‘creative coding 2 (data visualisation intro)’ in my folder ‘Catherine’ on Teams.

Using Excel, produce ***at least 2*** ***suitable*** graphs for the chosen data set. Your data visualisation should communicate a message about your chosen data set. This may be the communication of some interesting aspect(s) of the data, answering some question(s) involving the data, etc. The specifics will vary depending on the chosen data set. The graphs should include the appropriate labels, titles, legends etc.

One approach could be to think about a problem/issue in the area of housing, health, climate etc., find some relevant data set, and build your story (and possibly some insights) from the visualisations you create.

**(2) Report:**

In addition to producing a visualisation, you are also required to produce a report describing how you produced the visualisation.

Recommended structure for this report is as follows:

* Cover page
  + Student name
  + Student number
  + Course
  + Module
  + Year
  + Assignment title
  + Date submitted
* Table of contents
* Introduction – overall aim of the visualisation.
* Description of dataset – include the source of the dataset, your choice of dataset, ***appropriate*** measures of location and dispersion for the dataset, and ***why*** you chose those particular measures.
* Results - include screenshots of your visualisation.
* Discussion - include your choice of graphs; the strengths and weaknesses of your visualisation; what factors influence the effectiveness; is there redundant information omitted; how could the visualisation be improved given more time/tools; graphs that you have not decided to include as they would ***not work*** for this data set; do the graphs follow the principles of good design in data visualisation.

To illustrate your points, find and include an example of one existing ‘good’ visualisation and one ‘bad’ visualisation (include references) outlining the reasons for your choice in each case.

* Conclusions - What did you learn from the assignment? What would you do differently in future?
* References - include the source of the data you used.

**Guideline:** approximately 1000 - 1200 words with 1.5 spacing and Calibri 12 font.

Deliverables

Portfolio of Labs

Report (which includes graphics)

Resources

Lectures on Teams

Public data sources

Schedule

|  |  |
| --- | --- |
| Week 1 | Lecture |
| Week 2 | Lecture and Labs |
| Week 3 | Lecture and Labs/Project Briefing |
| Week 4 | Lecture and Labs/Lab Support for CA |
| Week 5 | Lecture and Labs/Lab Support for CA |
| Week 6 | Final Submission |

Marking Scheme

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| --- | --- | --- |
| Category | **Description** | Weighting % |
| Attendance and Engagement | In class labs and challenges, ability to work independently, attendance and engagement in labs | 5% |
| Visualisation and Report | Quality of writing, report structure, quality of graphics, report content (see details above) | 15% |
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Rubric

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| --- | --- | --- | --- |
|  | *F D C* | *C+ B- B* | *B+ A* |
|  | *Novice* | *Practitioner* | *Expert* |
| Report and Visualisations | Report will display a poor understanding of the requirements for this CA and poorly executed graphics | Report will display an adequate understanding of the requirements for this CA and reasonably executed graphics | Report will display an expert understanding of the requirements for this CA and excellently executed graphics |