UNIVERSITY OF BIRMINGHAM | BIRMINGHAM BUSINESS SCHOOL

'Triple-crown' accredited

Assignment Remit

Programme Title	BSc Accounting	
Module Title	Business Analytics	
Module Code	07 34272	
Assignment Title	Individual data project	
Level	H	
Weighting	75%	
Lecturers	Rob Fleming, Tim Mason, Idlan Zakaria, Dinisa	
Hand Out Date	28/02/2023	
Due Date & Time	09/05/2023	**12pm**
Feedback Post Date	31/05/2023	
Assignment Format	Other	
Assignment Length	1000 Words plus data visualisations	
Submission Format	Online	Individual

Assignment:

This assignment is based on the visualisation of data for different purposes. The data you will use for the assignment can be found here https://github.com/owid/co2-data it is data on global carbon emissions compiled by Our World in Data https://ourworldindata.org/ (a non-profit organisation who compile open data sets on a wide range of social, environmental and political issues). In the assignment you can focus on this data but we encourage you strongly to investigate other sources of relevant and reliable data that could be used alongside and combined with this data set.

You will use Tableau Public (or Tableau Desktop files saved to Tableau Public's web site) for this task. You should already have a copy of this software that you will use in classes during the module.

The task is to use the 'Our World in Data' data set, and any other data sources you have chosen, to compile two visual representations of the data.

1. The first visualisation should be suitable for the web pages of an international news organisation and should convey information about global carbon emissions to the general public.
2. The second visualisation should be a report to the directors of a global environmental consultancy company that highlights key issues, countries and sectors that contribute to carbon emissions. This report should be suitable for use on the company's internal intranet – it is not for public use.

As well as the visualisations you create you should submit a 1000-word explanation of the process you followed to create your visualisations. This report should explain.

1. The data you selected for each report; Why did you select this data for the target audience? How did you judge the data quality, relevance, and reliability?
2. The data preparation process you followed; How did you clean, format and prepare the data for use? How did you merge any additional data sets with the core data from Our World in Data?
3. The design of your visualization's; Why are they appropriate for the target audience? How do they follow principles of good visualization design?

Your data visualisations, and any dashboard or story you create, should be saved to the Tableau Public gallery. In your report you must provide links to your visualisations.

Module Learning Outcomes:
In this assessment the following learning outcomes will be covered:

- Select, evaluate and apply data extraction techniques to real-world datasets.
- Critically appraise techniques used for data cleaning, manipulation, and analysis and apply these techniques to real-world datasets using industry standard software tools.
- Select and implement techniques for data visualisation and apply this to real-world datasets.

Grading Criteria:

Please see marking rubric below

Feedback to Students:
Both Summative and Formative feedback is given to encourage students to reflect on their learning that feed forward into following assessment tasks. The preparation for all assessment tasks will be supported by formative feedback within the tutorials/seminars. Written feedback is provided as appropriate. Please be aware to use the browser and not the Canvas App as you may not be able to view all comments.

Plagiarism:
It is your responsibility to ensure that you understand correct referencing practices. You are expected to use appropriate references and keep carefully detailed notes of all your information sources, including any material downloaded from the Internet. It is your responsibility to ensure that you are not vulnerable to any alleged breaches of the assessment regulations. More information is available at https://intranet.birmingham.ac.uk/as/studentservices/conduct/misconduct/plagiarism/index.aspx.

Criteria	1st Class	2:1	2:2	Pass	Fail
Has the data used for the task been selected appropriately and is it clear that this data is relevant to the audiences? (10%)	All of the data selected is clearly relevant for the audience, is from reliable sources and additional data used complements the core data set.	Data sets are relevant to audience and from mostly reliable sources. Data sets may repeat and/or not obviously complement each other.	Most data is used is relevant and reliable. Links to the needs of the audience may be unclear.	Just the core data set is used and/or additional data is not appropriate for audience and/or comes from sources that may not be reliable.	Inappropriate data is used.
Has the data been prepared, cleaned and formatted correctly using appropriate tools(30%)	Data has been cleaned appropriately, is formatted well for analysis. Duplication, omissions and outliers in data have been allowed for appropriately. The tools used for data cleaning and prep are appropriate for the task and minimal manual transcription has been used. Integrity of base data has been preserved. Data sets have been combined using appropriate joins and/or unions and keys.	Data has been cleaned appropriately, is formatted adequately for analysis. Duplication, omissions and outliers in data have been recognised and corrected. The tools used for data cleaning and prep are appropriate for the task some manual transcription has been used. Integrity of base data has been preserved. Data sets have been combined using joins and/or unions.	Data has mostly been cleaned appropriately, is formatted adequately for analysis but with errors. Duplication, omissions and outliers may remain in data. The most appropriate tools for data cleaning and prep may not be used and significant manual transcription has been used. Integrity of base data may be compromised. Data sets have been combined.	Data is not fully cleaned or formatted correctly for analysis although an attempt has been made to do this. Data quality is low (ie duplicates, omissions and errors remain in the data). Data has been cleaned manually or using inappropriate tools.	Data is used in its raw form and no attempt has been made to clean or format it.

Are the visualisations that have been prepared appropriate for the target audiences? Do they, for example, take account of the relative expertise of the audience? (40%)	Visualisations are clearly appropriate for audience allowing for knowledge, expertise, and the purpose of communication. Interactive elements of visualisations (filters etc) allow target audience to explore data at an appropriate level. Visualisations follow best practice in data representation (eg chart types selected are appropriate for data). Dashboard and or story formats used as appropriate to enhance communication. Clear evidence of ability to use visualisation software to good effect.	Visualisations are appropriate for audience allowing for knowledge, expertise, and the purpose of communication. Interactive elements of visualisations (filters etc) are used for target audience to explore data but may be poorly selected. Visualisations follow mostly best practice in data representation (eg chart types selected are appropriate for data). Dashboard and or story formats used but may not follow best practice. Evidence of appropriate use of features of visualisation software.	Visualisations are designed with some reference to the knowledge, expertise, and the purpose of communication. Interactive elements are included in visualisations. Visualisations follow some best practices in data representation (eg chart types selected are appropriate for data) but may contain poorly designed elements. Dashboard and or story formats not used or used inappropriately. Some evidence of use of visualisation software effectively.	Visualisation designs contain little reference to target audience or the needs of different audiences. Visualisations do not follow best practice in data representation (eg pie chart used for time series data). Design of visualisations is overly complex or simplistic. Poor use of visualisation software.	Poorly designed visualisations that do not meet the needs of users. Poor selection of chart types or use of charts not suited to data. Little evidence of ability to use visualisation software.
Does the explanatory report demonstrate understanding of the process and best	Report shows clearly and in full that the design process followed for each	Clear evidence of an understanding of user needs in visualisation design	Some evidence that the needs of users have been considered. The	The process used to develop visualisations is explained but there	Report fails to explain how visualisations were designed and

practice in data manipulation and the design of visualisations? (20%)	user group is appropriate and is tailored to a clear evaluation of the user needs. Demonstration that decisions made in the selection, preparation and representation of data are grounded in a good understanding of best practices.	and those visualisations have been designed with these in mind. Good explanation of decisions made in the selection, preparation and representation of data and some demonstration of an understanding of best practices.	selection, preparation, and representation of data is explained but these may not follow best practices.	is little reference to best practice, the needs of users or the other factors used in the process.	developed. No evidence of understanding of good practice in data communication.