Assessment Brief

Module title	Programming for Data Science
Module code	COMP5712M
Assignment title	Group project
Assignment type and description	In-course assessment, working in a group of up to 4 members
Rationale	To develop your skills in organising and presenting a data analysis project
Word limit and guidance	Details on word limit specified within the project specification document group_project.ipynb
Use of GenAI in this assessment	AMBER: AI tools can be used in an assistive role. You are permitted to use AI tools for specific defined processes within the assessment.
Weighting	60%
Submission deadline	25 November 2025
Submission method	Gradescope
Feedback provision	Marks and feedback for the submitted work returned via Gradescope, within 3 weeks after the submission deadline
Learning outcomes assessed	LO2: Implement applications across a selected domain (e.g., health, finance) LO3: Build systems that integrate with the internet and databases
Module leader	Hui Lau

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1. Assignment guidance

This is a group coursework. You are to work in a team of up to 4 members to complete a data analysis project.

2. Use of GenAI

This coursework is rated AMBER by the university: AI tools can be used in an assistive role only. You are permitted to use AI tools for specific defined processes to support your learning, but not to generate assessed work on your behalf.

Within this assessment you may use Generative AI to:
- clarity and simplify complex concepts
- suggest possible ways to organise or structure your report
- provide general feedback and advice on your coding style, such as readability, consistency, or adherence to conventions

You must not use Gen AI to:
- produce written content (code, comments, explanations, or report text) that you submit as part of your work, even if you modify it afterwards
- rewrite, edit, or adapt any part of you submitted work on your behalf

3. Assessment tasks

Please complete the group project as specified in the Jupyter notebook file group_project.ipynb. You will write your code in the same notebook file. Please do not change the name of the file. Once completed, produce a PDF version of the notebook to be submitted together with the notebook file.

4. General guidance and study support

Developing your academic skills will enable you to become a more effective learner. Online resources on critical thinking, reading, academic writing and more can be found at Skills@Library website at https://library.leeds.ac.uk/info/1401/academic_skills#minerva.

5. Assessment criteria and marking process

No late submission allowed.

6. Presentation and referencing

Please refer to the details given in the template file group_project.ipynb.

7. Submission requirements

Please submit your **group_project.ipynb** and the produced PDF file to Gradescope. Once submitted, make sure to check the submitted files are not corrupted. Only one member need to submit the files, and follow the instructions on how to add members to the submission on Gradescope.

8. Academic misconduct and plagiarism

Leeds students are part of an academic community that shares ideas and develops new ones.

You need to learn how to work with others, how to interpret and present other people's ideas, and how to produce your own independent academic work. It is essential that you can distinguish between other people's work and your own, and correctly acknowledge other people's work.

All students new to the University are expected to complete an online Academic Integrity tutorial and test, and all Leeds students should ensure that they are aware of the principles of Academic integrity.

When you submit work for assessment it is expected that it will meet the University's academic integrity standards.

If you do not understand what these standards are, or how they apply to your work, then please ask the module teaching staff for further guidance.

By submitting this assignment you are confirming that the work is a true expression of your own work and ideas and that you have given credit to others where their work has contributed to yours.

9. Assessment/ marking criteria grid

The marking scheme is as follows:

Project Plan					
	Fail (0-4)	**Pass (5)**	**Merit (6)**	**Distinction (7-10)**	**Weight**
Description of Data	The dataset and title connection is unclear. The source of the dataset is missing or very vague. Minimal or no description of the dataset. No comments on accuracy, reliability, quality, or usability of data.	The connection between dataset and title is somewhat clear. The source of the dataset is mentioned but lacks detail. Basic description of the dataset is provided. Some comments on accuracy and reliability, and basic discussion on data quality and usability.	Clear connection between dataset and title. The source of the dataset is explained with some detail. Detailed description of the dataset. Good comments on accuracy and reliability. Detailed discussion on data quality, usability, and presentation, including missing values and data types.	Strong and clear connection between dataset and title. The source of the dataset is thoroughly explained. Comprehensive description of the dataset. Insightful comments on accuracy and reliability. Extensive discussion on data quality, usability, and presentation, addressing all relevant aspects comprehensively.	10
Overview of Aims	Context and motivation are unclear or missing. Objectives are either too few or	Basic context and motivation are provided. A sufficient number of specific objectives are	Clear context and motivation are provided. A good number of specific, clear objectives are	Detailed context and strong motivation are provided. An appropriate number of specific, clear, and well-	5

	too vague. Objectives are not appropriately challenging or achievable.	present, though they may lack clarity. Objectives are somewhat challenging and achievable.	present. Objectives are appropriately challenging and achievable.	defined objectives are present. Objectives are both challenging and achievable, demonstrating a high level of ambition.	
System Design	Key components are not described or are very vague. The pipeline is not described or lacks coherence. No diagram or poorly structured explanation of architecture.	Key components are described at a basic level. The pipeline is described but may lack detail or clarity. Basic diagram or structured explanation of architecture is provided.	Key components are well described, including purpose and challenges. The pipeline is clearly described, showing how components work together. Good diagram or well-structured explanation of architecture is provided.	Key components are comprehensively described, including detailed purpose and challenges. The pipeline is thoroughly described, with clear and detailed explanation of how components work together. Excellent diagram or highly structured explanation of architecture is provided.	5
Program Code					
	Fail	**Pass**	**Merit**	**Distinction**	**Weight**
Program Code (Structure and Readability)	Imported packages/modules are not used appropriately. Error handling and exception handling are absent or minimal. Code is poorly organized, with minimal use of functions/classes. Minimal comments within code. Poor naming choices for variables and functions. Written explanations of code cells and outputs are lacking or very unclear. Code quality and variety are poor.	Imported packages/modules are used appropriately in some instances. Basic error handling and exception handling are present. Code is somewhat organized, with basic use of functions/classes. Some comments within code are present. Acceptable naming choices for variables and functions. Written explanations of code cells and outputs are present but may lack detail. Code quality and variety are acceptable.	Imported packages/modules are used appropriately throughout. Good error handling and exception handling are present. Code is well-organized, with good use of functions/classes. Good comments within code. Good naming choices for variables and functions. Detailed written explanations of code cells and outputs are present. Code quality and variety are good.	Imported packages/modules are used excellently. Excellent error handling and exception handling are present. Code is very well-organized, with extensive use of functions/classes, avoiding overly complex and long lines of code. Excellent comments within code. Excellent naming choices for variables and functions. Highly detailed and informative written explanations of code cells and outputs are present. Code quality and variety are excellent.	15
Project Outcome, Presentation, and Conclusion					
	Fail (0-4)	**Pass (5)**	**Merit (6)**	**Distinction (7-10)**	**Weight**
Explanation of Results	Overview of results is missing or very unclear. Objectives are not discussed. Explanation of visualizations is minimal or unclear. Poor overall quality of communication.	Basic overview of results is provided. Some objectives are discussed but may lack clarity. Basic explanation of visualizations. Acceptable overall quality of communication.	Good overview of results is provided. Most objectives are discussed clearly. Good explanation of visualizations. Good overall quality of communication.	Detailed overview of results is provided. All objectives are discussed thoroughly. Excellent explanation of visualizations. Excellent overall quality of communication.	10

Visualization of Results	Minimal or no visualizations. Visualizations are not informative or appropriate. Poor labelling and scaling of figures.	Basic visualizations are provided. Visualizations are somewhat informative and appropriate. Acceptable labelling and scaling of figures.	Good variety of informative and appropriate visualizations. Good labelling and scaling of figures.	Excellent variety of highly informative and appropriate visualizations. Excellent labelling and scaling of figures.	10
Conclusion and Presentation	Achievements and limitations are not discussed. Future work is not mentioned. Report is poorly organized.	Basic discussion of achievements and limitations. Future work is mentioned but lacks detail. Report is somewhat organized.	Good discussion of achievements and limitations. Future work is discussed in some detail. Report is well-organized.	Detailed discussion of achievements and limitations. Future work is discussed comprehensively. Report is excellently organized.	5