

Assessment Point

School of Business and Management

Module Code	7503UNIDM
Module Title	Data Analysis and Application
Module Leaders	
Assignment Tutor	
Assignment Title	Report (Task 1 +Task 2)
Assignment Number	1
Weighting	100%
Submission Date	Week 8
Learning Outcomes assessed by this Assignment (see course handbook)	All
Turnitin Submission Requirement	Yes

ASSESSMENT BRIEF AND MARKING RUBRIC

Module Title: 7503UNIDM, Data Analysis and Application

Assessment Point: Final Assessment Point (Week 8)

Assessment Task: Report

Word Count Limit: 4,000 +/- 10% (excluding references and appendices)

Weighting: 100% of overall module grade

Extenuating Circumstances

Where illness or other verifiable cause prevents timely submission of the summative assessments, you are required to contact the Unicaf Extenuating Circumstances team in the first instance, via extenuating.circumstances@unicaf.org , for further information on how to make an appropriate request for consideration of your circumstances. It is important to note that any request must be made to the above-mentioned team in advance of the originally stipulated deadlines, otherwise it shall be considered as late and will not be reviewed further unless valid



independent evidence exists to support that you could not have reasonably gotten in touch any sooner.

Academic Misconduct, including Plagiarism

Please ensure that you are familiar with the relevant regulations regarding academic misconduct. By submitting the assignment, you declare that it is your own work and that the material and sources of information used, including internet sources, have been fully identified and properly acknowledged. In addition, you confirm that the presented work has not been submitted for any other assessment.

You also acknowledge that the faculty reserves the right to investigate allegations of plagiarism and other forms of academic misconduct, which, if proven and depending on the severity levels of the offense, may result in a penalty that could affect your progress.

By submitting your work, you acknowledge that you have read and agreed with the above statements.



General Guidance

Your assignment should be MS – Word processed (handwritten assignments are not accepted), using Times New Roman size 12 font, double spaced, with numbered pages and your student number printed as a footer on every page. Please note that this report is supported by academic research, so you should adhere to the appropriate referencing guidance (Harvard Style of referencing). Please note that your assignment will be submitted via the Turnitin software. This allows us to monitor and deal with plagiarism.

The word limit stated for this assignment excludes the list of references at the end of the assignment but includes all text in the main body of the assignment (including direct quotations, in-text citations, footnotes, tables, diagrams and graphs). Please be aware that exceeding the word limit will affect the academic judgment of the piece of work and may result in the award of a lower mark. Appendices are not considered a supplement and will not be assessed as part of the content of the assignment. As such, they will not contribute to the grade awarded; however, it may be appropriate to use an Appendices section for any material which is a useful reference for the reader. Please note that appendices are not included in the word count. Please indicate the word count length at the end of your assignment.

The majority of references should come from primary sources (e.g. journal articles, conference papers, reports, etc.), although you can also utilize area-specific textbooks. You must ensure that you use the Harvard style of referencing.

Marking and Assessment

This assignment will be marked out of 100% and contributes to 100% of the total module mark. The pass mark is 50%.

Submission Deadline

Please note that your work should be uploaded by the coursework deadline - failure to do this will lead to your coursework being marked as though it was late or missing. Work submitted after the submission deadline without a granted extension to the submission deadline or a deferral in accordance with the Extenuating Circumstances Policy will not be accepted and will be recorded



as 0%.

Please note that you are responsible for making sure you understand the process of uploading your assignment on the VLE before your coursework submission deadlines.

Learning Outcomes

After completing this assessment, the students should be able to:

1. Strategically apply analytical tools and techniques to transform data into actionable insight.
2. Strategically evaluate the use of various analytical approaches and communicate their managerial implications to a non-technical audience.
3. Critically apply appropriate data visualisation techniques to convey findings.
4. Critically analyse and articulate how modern companies use data analysis to solve marketing problems in new ways and pursue new opportunities.

Assessment Guidelines

IMPROVING SUBSCRIPTION TO BANK TERM DEPOSIT SERVICE

A bank has experienced a reduction in revenue and is unsure about the best course of action. Following an examination, they discovered that the primary factor is that their clients are not making deposits as regularly as they once did. With the use of term deposits, banks can keep deposits on hand for a predetermined period of time while investing the money in financial products with better profit margins. Additionally, banks have a better chance of convincing term deposit customers to purchase other goods like funds or insurance in order to boost their profits. Therefore, the bank would prefer to identify current customers who are more likely to sign up for a term deposit and concentrate marketing efforts on such customers.

The assessment consists of two analytical tasks (Task 1 and Task 2):

Task 1: Based on the analysis from a number of marketing campaigns the bank performed, predict which of the existing clients are most likely to subscribe to a term deposit. The marketing campaigns were based on phone calls. Often, more than one contact with the same client was required. For this

task, you are provided with two data files. The first one, MarketingCampaignsData.csv, includes information about:

- Various demographic information about customers – their age, job, marital status, and education.
- Customer account information – more specifically, the status of their current credit (default), information about their past mortgage (housing) and/or personal loan applications (loan), and the preferred mode of contact (mobile or landline).
- Details about specific marketing campaign – marketing campaign (there were five in total, 1 – 5), month and day of the week the customer was contacted, duration of the call (in seconds), and the contact outcome (success or failure, poutcome column).
- The last column (called y) tells if the customer has eventually subscribed to a term deposit ('yes') or not ('no').

Everything described above, with the exception of column y, is contained in the second file, ExistingCustomers.csv, which contains data about the bank's present clients. Using the information from the first file as a foundation, try to foresee which of the bank's present clients is most likely to sign up for a term deposit. Determine who will subscribe, explain which criteria are most crucial for forecasting client membership to a term deposit, and pick the optimal prediction technique before creating a prediction model. Give a thorough justification of your analytical strategy, including the workflow model's components. Describe the steps taken to obtain the most accurate predictions. Give a thorough rundown of the results and expound on your conclusions.

Task 1: Contributes 50% of the Total Marks

Task 2: Once you have established who is most likely to subscribe to a term deposit, explore if different types of subscribers exist. More specifically, establish how many segments of subscribers there are, profile and name the identified segments, and recommend a marketing strategy for each segment. As in the previous task, elaborate on your approach and your findings. Provide a link to your workflow model and files (be explicit in which file you have saved your clustering results).

After you have finished the two tasks, you should give advice on what the bank should do to increase its use of its bank term deposit service. Your recommendations must be connected to the insights



you have generated and other outside sources (from research and/or practice), even though you are allowed to be creative. Please be aware that this report will be read by two different audiences. The bank's board of directors is the primary audience. They dislike complicated, long reports that take hours to read. They like simple, understandable info graphs with little to no text instead. They are willing to read up to three slides of an infographic. Place these in the executive summary so they won't have to search through your report to locate them.

The data analysis team at the bank is the second audience. They will read and examine your analytical methodology and conclusions in greater detail. In order for them to inspect your workflows, working files, and outputs, be thorough and accurate while also providing links to all of your models. When creating models, be sure to provide a rationale for your choices. Keep in mind that you do all of these studies to aid the bank in increasing term deposit product subscription.

Task 2: Contributes 50% of the Total Marks

Additional Instructions

All analyses must be performed in Orange Data Mining software. If necessary, install add-ons that will assist you in completing the two tasks. In explaining your analytical approach, you are allowed to insert workflow screenshots. It is vital that your workflows are well annotated and made available. Therefore, upload all your workflows and data files to the UNICAF VLE system (Submission link). Failure to do so will have a negative impact on your final mark. **When making infographics you can use any software you want.**

Final delivery of Report

The assessment is an individual report (4,000 words) and part of that is a written report proper (2,000 - 2,500 words). The rest will be data analysis workflows and datasets that you have to produce by using **Orange Data Mining software.** The latter must be included in your submission (UNICAF VLE system) and will be counted as the equivalent of 1,500 - 2,000 words.

Your assignment should be structured as follows:

Cover Page

Table of Contents

Executive Summary Infographics

1. Task 1

1.1. Approach (an explanation of the methodology) 10 marks

1.2. Findings 25 marks

1.3. Recommendations 10 marks

2. Task 2

2.1. Approach (an explanation of the methodology) 10 marks

2.2. Findings 25 marks

2.3. Recommendations 10 marks

3. Conclusion 10 marks

References (a list of references cited in the text according to the Harvard convention).

Appendices

NB: The minimum pass mark for the module is 50%

- ***Final submission of the summative assessment by the last Sunday of WEEK 8 (23:59).***
- ***Final submission should first be submitted to Turnitin and then to the final summative assessment link by 23:59 on the last Sunday of WEEK 8.***

LJMU Level 7 Grading Criteria

What does my Grade Mean? (Postgraduate Scale)

Please note that the individual passing mark for Liverpool John Moores University (postgraduate modules) is 50%.

Mark Range	Performance Characteristic	Grading criteria
90-100	Exceptional Pass	<ul style="list-style-type: none"> Exemplary attainment of all learning outcomes. Demonstrates an outstanding synthesis of varied theoretical positions in the analysis of key issues in the subject area. Wide-ranging emphasis on knowledge and ideas that are at the forefront of the discipline. Offers an exhaustive exploration of the literature and evidence-based. The material covered is accurate and relevant. The argument is highly sophisticated. The standard of writing is refined. No errors in the use of the specified referencing system. Well-presented and organised in an appropriate academic style.
80-89	Outstanding Pass	<ul style="list-style-type: none"> Excellent attainment of all learning outcomes, with some met to an exemplary standard. Demonstrates a comprehensive synthesis of varied theoretical positions in the analysis of key issues in the subject area. Wide-ranging emphasis on knowledge and ideas that are at the forefront of the discipline. Extends far beyond expected levels of engagement with the literature and evidence – base. The material covered is accurate and relevant. The argument is generally very astute. The standard of writing is refined. No errors in the use of the specified referencing system. Well-presented and organised in an appropriate academic style.
70-79	Excellent pass	<ul style="list-style-type: none"> Excellent attainment of all learning outcomes. Demonstrates a thorough synthesis of varied theoretical positions in the analysis of key issues in the subject area. Strong emphasis on knowledge and ideas that are at the forefront of the discipline. Thorough use of the literature and evidence-based. The material covered is accurate and relevant. The argument is persuasive and there are very perceptive elements. The standard of writing is refined. No errors in the use of the specified referencing system. Well-presented and organised in an appropriate academic style.

60-69	Good Pass	<ul style="list-style-type: none"> • Good attainment of all learning outcomes. • Demonstrates detailed synthesis of varied theoretical positions in the analysis of key issues in the subject area. • Good emphasis on knowledge and ideas that are at the forefront of the discipline. • Good consideration of the literature and evidence-based that develops from recommended readings. • The material covered is accurate and relevant. • The argument is persuasive. • The standard of writing is refined. • No errors in the use of the specified referencing system. • Well-presented and organised in an appropriate academic style.
50-59	Pass	<ul style="list-style-type: none"> • Adequate attainment of all learning outcomes. • Demonstrates a limited, but sufficient, synthesis of varied theoretical positions in the analysis of key issues in the subject area. • Some emphasis on knowledge and ideas that are at the forefront of the discipline. • Sufficient consideration of the literature and evidence-based, but little consideration beyond recommended readings. • The material covered is mostly accurate and relevant. • The argument is straightforward and relatively clear. • The standard of writing is well clear and readable, with some sophisticated phrasing. • No errors in the use of the specified referencing system. • Well-presented and organised in an appropriate academic style.
40-49	Needs some improvement	<ul style="list-style-type: none"> • Meets most, but not all learning outcomes. • Demonstrates limited synthesis of varied theoretical positions in the analysis of key issues in the subject area. • Less than expected emphasis on knowledge and ideas that are at the forefront of the discipline. • Basic consideration of the literature and evidence-based, but restricted to recommended readings. • Some inaccuracies or irrelevant materials that suggest confusion and misunderstanding. • The argument is relatively clear, although some elements are difficult to understand. • The standard of writing is well clear and readable, but overly simplistic. • Minor errors in the use of the specified referencing system, but meets key principles. • Well-presented and organised in an appropriate academic style.
30-39	Needs major improvement	<ul style="list-style-type: none"> • Approximately half the learning outcomes are met. • Demonstrates very little synthesis of varied theoretical positions in the analysis of key issues in the subject area. • Little emphasis on knowledge and ideas that are at the forefront of the discipline. • Minor consideration of the literature and evidence-based, with inadequate use of recommended reading and no exploration outside that some materials are accurate, but the amount of inaccurate or irrelevant materials indicates an insufficient understanding of key concepts. • The argument is poorly defined and defended. • The standard of writing is mostly clear and readable. • Some errors in the use of the specified referencing system, but meets key principles. • Generally, well presented and organised, but does not always conform to conventions of academic presentation.

20-29	Needs significant revision	<ul style="list-style-type: none"> • Most learning outcomes are not met. • Demonstrates no synthesis of varied theoretical positions in the analysis of key issues in the subject area. • Little or no emphasis on knowledge and ideas that are at the forefront of the discipline. • Superficial consideration of the literature and evidence-based. • There are major inaccuracies or significant amounts of irrelevant material. • The argument is very weak. • The standard of writing is reasonable and there are very few areas of confusion and/or errors in spelling/grammar. • Attempts to use the specified referencing system. • Meets key principles, but there are systematic errors. • Good presentation that may include some organisational errors and/or tendency not to conform to conventions of academic presentation.
0-19	Needs substantial work	<ul style="list-style-type: none"> • Does not meet any learning outcomes. • Demonstrates misunderstanding of varied theoretical positions in the analysis of key issues in the subject area. • No emphasis on knowledge and ideas that are at the forefront of the discipline. • No engagement with the literature and evidence-based. • The material covered is inaccurate or irrelevant. • The argument is incoherent. • Standard of writing is acceptable. The structure is reasonable, but there are some areas of confusion and/or some errors in spelling/grammar. • Attempts to use the specified referencing system, but there are significant errors. • Acceptable presentation that may include some organisational errors and a tendency not to conform to conventions of academic presentation.