

 Queen Mary University of London School of Business and Management	Coursework Assessment Criteria			Academic Year		
				2024/2025		
	Module Code BUSM203			Level	7	
	Module Title AI for Business					
Assessment Name: Coursework Report			Weighting %	100%	Group	N
			Word Count	3000 max		

Module Organiser	Dr Swagato Chatterjee	Date Submitted	18.09.2024
Internal Reviewer		Date Reviewed	
External Examiner		Date Approved	

Module Level Learning Outcomes to be assessed (Reference to Module Proposal Form)

No	Module Learning Outcome	Description
1	A1	Understand AI and how it can benefit businesses
2	A2	Understand applications of AI in practice and assess capabilities of core AI tools/technologies
3	A3	Understand the role of data and big-data and how to leverage these for creating customer value
4	A4	Understand ethical implications and limitations of AI in terms of the economy, government and society
5	B1	Identify the potential of AI for creating benefits for organisations and stakeholders
6	B2	Evaluate the appropriateness of AI tools depending on the business problem at hand
7	B3	Critically evaluate the limitations and application of AI, including ethical implications
8	C1	Ability to critically evaluate technological advances
9	C2	Ability to find the right AI tools for the (business) problem that needs addressing
10	C3	Assess practical challenges in implementation of AI technology
11	C4	Appreciate limitations and ethical implications for multiple stakeholders

Assurance of Learning (selected modules only): contribution to Programme Level Learning Outcomes (see programme rubric map)

No	Programme Learning Outcome	Description
1	1.1	Evaluates the breadth and depth of the debates in the relevant field

2	1.5	Demonstrates reflection on the choice of research methods and approaches, including any relevant issues or obstacles.
3	2.1	Selects credible sources of data
4	2.10	Recommends solutions that could be applied in practice
5	3.2	Expresses arguments coherently through writing
6	3.4	Displays good structure, formatting, style and presentation of writing
7	3.5	Cites sources of information and data using consistent and a recognised referencing style

Assessment instructions for students (as per QMPlus 'Assessment Information' tab)

DELIVERABLES

You are required to produce a written report, which is presented in a professional style (as opposed to a theoretical essay) with graphs/tables and references *where relevant* (these can include industry sources as well as academic). The report will be submitted to a client, which is a bank. The bank has shared a dataset along with descriptions, which is shared in the module assessment page. The report should address the following:

1. Part A: Predict the probability of loan sanction

The client expects you to build a basic Artificial Neural Network (ANN) model to predict and understand the probability of loan sanction. Here are the relevant instructions:

- Initial Analysis - Perform ANN analysis.

In the report, describe which variables you selected, how you designated these in the model (i.e. Dependent Variable, Factor, Covariate), and your evaluation of the model's performance (e.g. percentage of incorrect predictions). [5 Marks]

- Model Tuning - Make one change to the model and rerun the analysis.

In the report, describe the tuning task you performed with a brief rationale, and your evaluation of the tuned model's performance. Compare the performances of the tuned model to the initial model (i.e. consider the pros and cons of each model) and state which model is better. [10 Marks]

Further, examine the relative importance of predictors. You can do this in SPSS via the Output menu -> tick the box for "Independent Variable Importance Analysis" (see screenshot below).

- Compare the loan sanction factors for male vs female

In the report, first discuss the importance of the predictors (independent variables) for loan sanction in general (all data). Then, discuss the loan sanction factors for male vs female in as much detail as possible. For example, you should discuss which factors are more focused for male applicants and which factors get more focus for female applicants. Is there any change? If yes, why? [10 Marks]

2. Part B: Develop a segment-based loan sanction strategy.

The client is interested in understanding the different segments of loan applicants they currently have, with a view to using this knowledge for improved future targeting (and growth). The client expects you to conduct a cluster analysis to identify and understand current applicant segments.

- Initial Analysis:

In the report, discuss the initial cluster solution resulting from the above analysis. This should include (as a minimum), an evaluation of the cluster solution returned (i.e. how well does the model

perform?), and the number, size, and characteristics of the clusters/segments (describe them according to the segmentation criteria specified). [10 marks]

- Model Tuning - Make one change to the model and rerun the analysis.

In the report, discuss the change you made to the initial model, offering a brief rationale for it. Then, discuss the performance of the tuned model in comparison to the initial model – this will include comparisons of the number, size, and characteristics of the segment solutions, as well as a performance metric (i.e. Silhouette score). Conclude by stating which model is better based on your evaluation. [10 Marks]

- Recommend the loan marketing strategy based on your analysis. What other products of the bank can be sold to these loan applicant segments. Explain with rationale. [10 Marks]

3. Part C: Discuss the potential for innovation based on emergent technologies.

As mentioned earlier, the client also considers innovation a priority alongside growth. So you have been instructed to examine the potential for leveraging emergent technologies – specifically, the metaverse (including NFTs, blockchain, cryptocurrency, and game engines) and service robots (including humanoid robots, avatars, chatbots, and voice assistants) – for growing the client’s business through introduction of a new business model or revenue stream. Here are the requirements:

- Conduct further research on the service robots and metaverse in the context of banking through academic sources, market research databases and reputed media outlets. Please cite your information sources appropriately.

In the report, provide an introduction and a critical evaluation of these two technologies for the client, highlighting the latest developments, and the positive and negative aspects of the technologies in general. [15 Marks]

- In recent times, generative AI has become an important and path breaking innovation. Yet, the bank’s leadership is not sure how they can use it for their growth. Create a research driven report on how Generative AI can help the bank. [15 Marks]
- The bank employees are skeptical that AI can take away their jobs. The employee union of the bank is against application of AI in the bank. Customers are also skeptical about the use of AI in the bank. How should the company convince its employees and customers while applying AI in bank activities? [10 Marks]

4. **Overall presentation of the report** – professional layout and report style appropriate for business/executive readers, writing is clear and to the point, logical/coherent arguments to support points and recommendations, charts/figures and tables (where applicable) to help readers understand key points etc. [5 marks]

Submission Information

Please observe the following style guide. Unless otherwise specified

- All work must be typed and submitted in MS Word or Adobe PDF format

- Font size should be 12 point (unless otherwise specified)
- Font style should be Arial
- Lines should be double-spaced
- Leave margins for comment Insert page numbers
- Use a header containing your student ID number, the module code to which your work applies, and the date. And Please:
- Always spell-check and proofread your work before handing it in (once you have submitted your work you will not be permitted to retrieve it)
- Keep your own electronic back-up copy of your work and if possible, save on two devices
- Submit your work on time
- Avoid plagiarism

Guidelines and Late-Work Policy

1. Coursework submitted late (and there are no extenuating circumstances) will incur a late penalty. Five per
2. cent of the total marks available shall be deducted for every period of 24 hours, or part thereof, that an assignment is overdue there shall be a deduction of five per cent of the total marks available (i.e. five marks for an assessment marked out of 100). After seven calendar days (168 hours or more late) the mark shall be reduced to zero, and recorded as 0FL (zero, fail, late).
3. Each module has word limits for coursework assignments; however, the decision about whether to impose a penalty mark for exceeding the word limit is made by each module organiser. You must check the module handbook and the assignment briefing documents to see whether the particular module organiser has adopted a penalty system. It is your responsibility to read the handbook and assignment briefing carefully. If no penalty is specified then the module organiser will take into account the word length under the standard marking conventions. For example, if you have exceeded the word limit then it might be that you have not been sufficiently succinct or focused in your assignment and therefore might be penalised for these weaknesses. Please note that word limits do NOT include references or appendices. However if excessive material is included on appendices then this too will be judged accordingly and you may be awarded a lower mark.
4. You should ensure that your submission is in either Microsoft Word or PDF format.
5. Failure to submit in either one of these formats will result in a mark of 0 being awarded for the particular assessment. It is therefore your responsibility to ensure that the file format is correct and it can be opened by the receiving party.
6. You should ensure that the correct piece of assignment is uploaded as the document downloaded on the due date by the module organiser will be marked regardless of content. You will not have another opportunity to submit the work again if you mistakenly uploaded the wrong document.
7. ALLOW YOURSELF PLENTY OF TIME TO SUBMIT YOUR COURSEWORK. DO NOT LEAVE IT UNTIL THE LAST MINUTE
8. Computer problems, such as computer viruses, failure to make a back-up copy or temporary internet access problems, will NOT be viewed as a valid reason for late submission.
9. Check that your assignment submission has been successful, and print a copy of the confirmation screen.
10. If you submit your assignment after the deadline, you will still be able to submit your coursework via QMplus however you will be penalised for late submission, the only exception to this is if you have an approved extension due to extenuating circumstances.

Submission Deadline

Date	TBD
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Time	TBD
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Help and Support

- Module Organiser
- Disability and Dyslexia Service (DDS)
- Quantitative Skills Tutor
- Academic Writing Skills Tutor

Marking Rubric

	49% or less	50% – 59%	60% – 69%	70% +
Part A – C (see assessment instructions for marks breakdown)	Poor understanding of requirements. Submission does not meet with the minimum standard of work expected. This could be in terms of not carrying out the required analyses and/or describing the necessary steps. Discussion lacks insights and logic. The contents do not adequately reflect student's own analyses, arguments, and recommendations/conclusions. Little or no research input (where relevant) to highlight wider reading and understanding, and to lend credibility to recommendations/conclusions.	Basic understanding of requirements has been achieved. Submission meets the minimum standard of work expected. This could be in terms of carrying out the required analyses and/or describing the necessary steps, with a few lapses. Discussion requires greater insights and logic. The contents reflect student's own analyses, arguments, and recommendations/conclusions to a basic extent. Basic level of research input (where relevant) is evident.	Good understanding of requirements. Submission reflects a good standard of work in terms of carrying out the required analyses and describing the necessary steps. Discussion shows good insights and is logical/justified, although the arguments may need to connect better with the results from the analyses. The contents reflect student's own analyses, arguments, and recommendations/conclusions. Good level of research input (where relevant) is evident.	Excellent understanding of requirements. Submission goes beyond the standard of work expected in terms of carrying out the required analyses and describing the necessary steps, and drawing conclusions from these. Discussion shows excellent insights and is not only logical/justified, but also integrates insights from multiple sources. In-depth analyses or insights have been carried out or developed. The contents reflect original analyses and arguments, or recommendations and conclusions. Excellent level of research input (where relevant) is evident.
Overall structure and presentation	Very poor structure, which makes the content incoherent and/or incomprehensible in key areas. The style of writing is very abstract and theoretical and not at all relevant to the practical scenario(s) described in the brief. No tables, graphs or figures where relevant.	The structure is only marginally professional, which makes the content readable to a basic extent. The style of writing is somewhat abstract and theoretical, but in some key areas relevant to the practical scenario(s) described in the brief. Basic tables/graphs/figures included, and/or without much integration with the discussion.	The structure is professional, and the content is readable to a good extent. The style of writing is not abstract and theoretical, and practical with good relevance to the case scenario(s) described in the brief. Good inclusion of tables/graphs/figures in connection to the discussion.	The structure is very professional, the content is very clear and presented in an excellent manner. The style of writing is outstanding in that it is relevant and to-the-point, but also shows a lot of critical thought and analytical strength. Outstanding use of tables/graphs/figures in connection to the discussion, which not only enhances the presentation, but adds to the strength of the reports recommendations/conclusions.