

T2 2024 MIS710 Assignment 2 Rubric

Course: MIS710 - Machine Learning In Business

Part A: 40% report to Head of Data Analytics to implement and deploy the model, 2000 words	N (0-29)	N (30-49)	P (50-59)	C (60-69)	D (70-79)	HD (80-100)	Cr
1. Business understandings, business problem, value proposition ULO1 & ULO2, GLO1, GLO3 & GLO5, (4 marks)	0.6 points The report has many errors and omissions. (0-1.1 marks)	1.6 points The report outlines the business context and articulates business problem to be addressed insufficiently . Clear errors or omissions. Value proposition is unclear or not related to the business problem and context. (1.2-1.9 marks)	2.2 points The report outlines the business context and articulates business problem to be addressed. Some elements may be missing but the analysis is connected to the case study. Value proposition is provided, and somewhat connected to the business problem and context . (2-2.3 marks)	2.6 points The report outlines the business context and articulates business problem to be addressed clearly . Value proposition is clear, and connected to the business problem and context, and aimed at the data analytics reader . (2.4-2.7 marks)	3 points The report outlines the business context and articulates business problem to be addressed clearly, and comprehensively . Value proposition is clear, meaningful, consistent with the business problem and context, and aimed at the data analytics reader . (2.8-3.1 marks)	4 points The report outlines the business context and articulates business problem to be addressed clearly, meaningfully comprehensively . Value proposition is clear, meaningful, insightful, consistent with the business problem and context, and aimed at the senior data analytics management reader . (3.2-4 marks)	/ .
2. Data understandings, data preparation, exploratory data analysis and visualisation (EDA), ULO1, GLO1 & GLO3 (10 marks)	1.5 points Not provided or provided with many errors and omissions. (0-2.9 marks)	4 points Data understandings are insufficiently provided. Data cleansing, exploration and preparation, influencing factors was poorly attempted. (3-4.9 marks)	5.5 points Data understandings are provided. Data preparation, exploration and visualisation are presented with no/minimal interpretations and some errors. Factors influencing models are identified, but not clearly. (5-5.9 marks)	6.5 points Data understandings are provided clearly and connected to the case study, data exploration and visualisation. Data preparation, exploration and visualisation are presented accurately with some interpretations. Factors influencing models are identified. (6-6.9 marks)	7.5 points Data understandings are provided comprehensively and well connected to the case study, exploration and visualisation. Data preparation, exploration and visualisation are presented and interpreted accurately, correctly, meaningfully, and professionally . Factors influencing models are identified and explained. Data split and feature selection are described and justified based on data exploration. (7-7.9 marks)	10 points Data understandings are provided comprehensively, insightfully and well connected to the case study, data exploration and visualisation. Data preparation, exploration and visualisation are presented and interpreted accurately, correctly, meaningfully, professionally, stimulating and with insights . Factors influencing models are identified and explained clearly. Data split and feature selection are clearly described and well justified in consistency with data exploration. (8-10 marks)	/
	1.2 points Not provided or provided with many	3.2 points The Machine Learning approach,	4.4 points The Machine Learning approach,	5.2 points The Machine Learning approach,	6 points The Machine Learning approach,	8 points The Machine Learning approach,	/ :

3. Machine Learning Model Development, ULO2, GLO1, GLO3 & GLO5, (8 marks)	errors and omissions. (0-2.3 marks)	algorithms and models are presented unclearly and poorly . Python notebook file does not run and poorly documented. (2.4-3.9 marks)	algorithms and models are presented with minimal description and explanation . Python notebook file has minor errors and documents the code with basics comments. (4-4.7 marks)	algorithms and models are clearly presented and justified , with minimal description and explanation . Python notebook can execute successfully , file provides most output cells and documents the code with basics comments. (4.8-5.5 marks)	algorithms and models are clearly presented and justified , with some description and explanations . Python notebook file provides can execute successfully , output cells and prediction results , and clearly documents the code to replicate the model. (5.6-6.3 marks)	algorithms and models are clearly presented and justified , with a detailed description and explanations consistent with the business problem and solution . Python notebook file can execute successfully , provides output cells and prediction results , and clearly, professionally, and sufficiently documents the code to replicate the model. (6.4-8 marks)
4. Model evaluation, optimisation, cross-validation, and selection, ULO2, GLO1, GLO3 & GLO5, (10 marks)	1.5 points Not provided or provided with many errors and omissions. (0-2.9 marks)	4 points Model evaluation and comparison was attempted but poorly documented. (3-4.9 marks)	5.5 points Each model was evaluated (on split test data as needed) using essential and relevant performance metrics. Two predictive models were compared on split test data based on the selection criteria. Minimal performance metrics and selection criteria were documented with some explanation. Clarify needs to be improved. (5-5.9 marks)	6.5 points Each model was evaluated (on split test data as needed) using essential and relevant performance metrics. Two predictive models were compared on split test data based on the selection criteria. Clustering modelling is attempted but the result is unclear. Basic performance metrics and selection criteria were documented with some explanation. Clarify needs to be improved. (6-6.9 marks)	7.5 points Each model was evaluated (on split test data as needed) using essential and relevant performance metrics. Two predictive models were compared on split test data based on the selection criteria, hyper-parameter optimisation and cross-validation results. A clustering model is presented and illustrated; justification of the number of clusters is provided. Essential performance metrics and selection criteria were relevant , accurately documented with some explanation about pros and cons. Model recommendation is stated with some justification. (7-7.9 marks)	10 points Each model is evaluated (on split test data as needed) using essential and relevant performance metrics. Two predictive models are compared on split test data based on the selection criteria, hyper-parameter optimisation and cross-validation results convincingly . A clustering model is presented and illustrated with insights: an analysis of the cluster characteristics is provided, along with a clear and accurate interpretation; the justification for feature selection and the number of clusters is clear and convincing . Essential performance metrics and selection criteria were relevant to the machine learning models and business problem and context, accurately and clearly documented . Model recommendation is clearly stated and

						justified. Pros and cons were thoroughly explained, providing a strong rationale for the model selection. (8-10 marks)	
5. Model implementation, and maintenance, ULO2, GLO1, GLO3 & GLO5, (4 marks)	0.6 points Not provided or provided with many errors and omissions. (0-1.1 marks)	1.6 points Technical notes and suggestions for deployment and maintenance was attempted but poorly documented. (1.2-1.9 marks)	2.2 points Technical notes, including software libraries, programming language, and computing environment, the machine process diagram and data pre-processing employed, are documented to assist model implementation. Some aspects may be missing. Suggestions for maintaining the model's accuracy and relevance over time are documented with minimal explanation. Clarify needs to be improved. (2-2.3 marks)	2.6 points Technical notes, including software libraries, programming language, and computing environment, the machine process diagram and data pre-processing employed, are documented to assist model implementation, with minor issues. Suggestions for maintaining the model's accuracy and relevance over time are documented with some explanation . Clarify needs to be improved. (2.4-2.7 marks)	3 points Technical notes, including software libraries, programming language, and computing environment, the machine process diagram and data pre-processing employed, are clearly documented to assist model implementation. Suggestions for maintaining the model's accuracy and relevance over time are relevant and accurately documented . (2.8-3.1 marks)	4 points Technical notes, including software libraries, programming language, and computing environment, the machine process diagram and data pre-processing employed, are clearly and accurately documented to assist model implementation. Suggestions for maintaining the model's accuracy and relevance over time are relevant, accurately documented, and clearly explained . (3.2-4 marks)	/ .
6. Business presentation and communication effective and appropriate for the target audience - data analytics management, ULO2, GLO1, GLO3 & GLO5, (4 marks)	0.6 points The report is poorly structured/incoherent. Executive summary is missing or poorly written or does not include recommendations. Multiple errors in the use of language and formatting. No/very limited adherence to referencing standards. (0-1.1 marks)	1.6 points The report lacks sufficient structure, coherence, and logic. Executive summary is insufficient in representing the report, and/or recommendations are insufficiently clear. Multiple errors in the use of language, formatting, and/or referencing standards. (1.2-1.9 marks)	2.2 points Adequate business report written with clear structure and minimal confusion/errors. Executive summary adequately represents the report, with clear and broadly relevant recommendations. May be some errors in structure, content, tone, and formatting, and use of language, and may be some minor errors in referencing. (2-2.3 marks)	2.6 points Well-presented business report with coherent structure, content, tone, and formatting. Executive summary is clear and coherent, and well-aligned to the details in the report, with clear, specific, and relevant recommendations. May be minimal minor errors (if any) in the use of language and referencing. (2.4-2.7 marks)	3 points Comprehensive and concise business report, with coherence, logic, structure, content, tone, and formatting to confidently convey a professional consultancy level of communication. Executive summary is clear, coherent, well-aligned to and cross referenced with the details in the report, and convincing based on the analysis and findings in the report, with clear and specific recommendations aimed at the data analytics reader. Fluent use of language and adherence to referencing style including in-text citations.	4 points Exceptional quality, concise business report, with coherence, logic, structure, content, tone, and formatting to commandingly conveying a professional consultancy level of communication. Executive summary is clear, coherent, well-aligned to and cross referenced with the details in the report, and comprehensively, convincingly based on the analysis and findings in the report, with clear, specific, and insightful recommendations aimed at the senior data analytics management reader. Persuasive and fluent use of language and	/ .

					(2.8-3.1 marks)	all sources are accurately referenced and in-text cited. (3.2-4 marks)	
Part B: 20% report to executive business management stakeholder who will adopt and use the model, 1000 words	N (0-29)	N (30-49)	P (50-59)	C (60-69)	D (70-79)	HD (80-100)	Cr
1. Presentation and Analysis of the business case using the Business Analysis Core Concept Model (BACCM), ULO1 & ULO2, GLO1, GLO3 & GLO5, (4 marks)	0.6 points The report has many errors and omissions. (0-1.1 marks)	1.6 points The report analyses the business case and articulates business problem to be addressed insufficiently . Clear errors or omissions. Business solution and recommended actions are unclear or not related to the machine learning model. (1.2-1.9 marks)	2.2 points The report analyses the business case in terms of BACMM. Some elements may be missing but the analysis is connected to the case study. (2-2.3 marks)	2.6 points The report analyses the business case clearly in terms of BACMM; The analysis is clear, and connected to with the assignment case study ; and aimed at the business reader . (2.4-2.7 marks)	3 points The report analyses the business case clearly, and comprehensively in terms of BACCM; i.e. Analysis of business needs, solution, value, context, stakeholders, and change is clear, meaningful, consistent with the assignment case study ; and aimed at the business reader . (2.8-3.1 marks)	4 points The report analyses the business case clearly meaningfully comprehensively in terms of BACCM; i.e. Analysis of business needs, solution, value, context, stakeholders, and change is clear, meaningful, insightful, actionable, consistent with the assignment case study ; and aimed at the senior business management reader . (3.2-4 marks)	/ .
2. Insights from exploratory data analysis and visualisation (EDA), ULO1, GLO1 & GLO3, (4 marks)	0.6 points Not provided or provided with many errors and omissions. (0-1.1 marks)	1.6 points Responses to the client's requests are insufficiently provided. Data analysis and visualisation are poorly attempted. (1.2-1.9 marks)	2.2 points Responses to the client's requests are provided. Some aspects may be missing or inaccurate. Data analysis and visualisation are presented with no/minimal interpretations and some errors. (2-2.3 marks)	2.6 points Analysis results respond well to the case study and client's requests. Data analysis and visualisation are presented and interpreted accurately and correctly . (2.4-2.7 marks)	3 points Analysis results are provided comprehensively, and well responded to the case study and client's requests. Data analysis and visualisation are presented and interpreted accurately, correctly, meaningfully, professionally and aimed at the business reader . (2.8-3.1 marks)	4 points Analysis results are provided comprehensively, insightfully and well responded to the case study and client's requests. Additional insightful analyses are provided. Data analysis and visualisation are presented and interpreted accurately, correctly, meaningfully, professionally, stimulating and with insights for the senior business management. (3.2-4 mark)	/ .
3. Proposed machine learning solution, ULO2, GLO1, GLO3 & GLO5, (4 marks)	0.6 points Not provided or provided with many errors and omissions.	1.6 points Model proposal and performance discussion is attempted but poorly	2.2 points A Machine Learning solution is proposed , it's somewhat relevant and	2.6 points A Machine Learning solution is proposed , it's relevant and consistent with the	3 points A Machine Learning solution is clearly proposed , it's relevant and	4 points A Machine Learning solution is clearly proposed with explanations ,	/ .

	(0-1.1 marks)	documented. (1.2-1.9 marks)	consistent with the case study. The model performance evaluation is accurately and clearly presented. Clarify needs to be improved. (2-2.3 marks)	case study. The model performance evaluation is accurately and clearly presented, interpreted. Clarify needs to be improved. (2.4-2.7 marks)	consistent with the BACCM analysis, and aimed at the business reader. The model performance evaluation is accurately and clearly presented and interpreted, and aimed at the business reader. (2.8-3.1 marks)	relevant and consistent with the BACCM analysis, and aimed at the senior business management reader. The model performance evaluation is accurately and clearly presented, interpreted, and discussed with pros and cons. (3.2-4 marks) s)	
4.Recommendations for business use, ULO2, GLO1, GLO3 & GLO5, (4 marks)	0.6 points Not provided or provided with many errors and omissions. (0-1.1 marks)	1.6 points Business recommendations are unclear or not related to the identified problem. (1.2-1.9 marks)	2.2 points Business recommendations, with some benefits and implications are provided, and somewhat connected to the identified problem. (2-2.3 marks)	2.6 points All business recommendations, benefits and implications are provided, clear, and connected to the identified problem; aimed at the business reader. (2.4-2.7 marks)	3 points All business recommendations, benefits and implications are provided, clear, meaningful, consistent with the identified problem; and aimed at the business reader. (2.8-3.1 marks)	4 points All business recommendations, benefits and implications are provided, clear, meaningful, insightful, actionable, consistent with the identified problem; and aimed at the senior business management reader. (3.2-4 marks)	/ .
5. Business presentation and communication effective and appropriate for the target audience - senior business management, ULO2, GLO1, GLO3 & GLO5, (4 marks)	0.6 points The report is poorly structured/incoherent. Executive summary is missing or poorly written or does not include recommendations. Multiple errors in the use of language and formatting. No/very limited adherence to referencing standards. (0-1.1 marks)	1.6 points The report lacks sufficient structure, coherence, and logic. Executive summary is insufficient in representing the report, and/or recommendations are insufficiently clear. Multiple errors in the use of language, formatting, and/or referencing standards. (1.2-1.9 marks)	2.2 points Adequate business report written with clear structure and minimal confusion/errors. Executive summary adequately represents the report, with clear and broadly relevant recommendations. May be some errors in structure, content, tone, and formatting, and use of language, and may be some minor errors in referencing. (2-2.3 marks)	2.6 points Well-presented business report with coherent structure, content, tone, and formatting. Executive summary is clear and coherent, and well-aligned to the details in the report, with clear, specific, and relevant recommendations. May be minimal minor errors (if any) in the use of language and referencing. (2.4-2.7 marks)	3 points Comprehensive and concise business report, with coherence, logic, structure, content, tone, and formatting to confidently convey a business consultancy level of communication. Executive summary is clear, coherent, well-aligned to and cross referenced with the details in the report, and convincing based on the analysis and findings in the report, with clear and specific recommendations aimed at the management reader. Fluent use of language and adherence to referencing style including in-text citations.	4 points Exceptional quality, concise business report, with coherence, logic, structure, content, tone, and formatting to commandingly conveying a professional business consultancy level of communication. Executive summary is clear, coherent, well-aligned to and cross referenced with the details in the report, and comprehensively, convincingly based on the analysis and findings in the report, with clear, specific, and insightful recommendations aimed at the senior management reader. Persuasive and fluent use of language and all sources are accurately	/ .

					(2.8-3.1 marks)	referenced and in-text cited. (3.2-4 marks)
Total						

Overall Score

N 0 points minimum	N 18 points minimum	P 30 points minimum	C 36 points minimum	D 42 points minimum	HD 48 points
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