

**Assignment group number:**

**CLO1 - Apply appropriate data science concepts, statistics, and machine learning to make predictions on data. (C3, PLO2)**

Criterion	Missing / Unacceptable	Poor	Good	Excellent	Marks
<b>Model Selection (CLO1)</b>	No justification for model selection. Approach irrelevant or lacks evidence.	Limited or weak justifications for model selection. Choices appear arbitrary or poorly supported.	Adequate justifications are presented. The chosen model is generally appropriate and supported by reasonable evidence or rationale. Explanation of algorithm behavior and comparison with alternatives is acceptable.	Strong and insightful justification for model selection. The model is highly suitable and well-supported by evidence. Student demonstrates a deep understanding of algorithm suitability and optimization. Advanced or creative configurations (e.g., using variants or fine-tuned architectures) are evident and aligned with predictive goals.	
	<i>0–5 marks</i>	<i>6–10 marks</i>	<i>11–17 marks</i>	<i>18–25 marks</i>	

Criterion	Missing / Unacceptable	Poor	Good	Excellent	Marks
<b>Data Preprocessing (CLO2)</b>	Data preprocessing steps are missing or irrelevant.  <i>0–2 marks</i>	Data preprocessing steps are incomplete and not described clearly.  <i>3–5 marks</i>	Relevant preprocessing steps are explained, offering clear details about the components.  <i>6–7 marks</i>	The preprocessing steps are informative, succinct, and provide detailed insights into the data science components.  <i>8–10 marks</i>	
<b>Descriptive and Exploratory Data Analysis (CLO2)</b>	Descriptive and exploratory analytics are missing or completely irrelevant. No meaningful analysis or interpretation of data patterns.  <i>0–4 marks</i>	Analytical explanations are minimal, unclear, or poorly aligned with data science and business intelligence objectives. Limited understanding of descriptive or exploratory analysis is shown.  <i>5–8 marks</i>	Descriptive and exploratory analytics are appropriately conducted with clear explanations. Visuals and summaries reveal relevant insights supported by logical reasoning and proper data interpretation.  <i>9–12 marks</i>	Comprehensive and insightful descriptive and exploratory analytics are performed. Analyses are well-structured, supported by meaningful visualisations, and demonstrate a deep understanding of data relationships and business intelligence concepts. Evidence of thoughtful interpretation, trend discovery, or correlation analysis adds value.  <i>13–15 marks</i>	
<b>Graphing and Visualisation (CLO2)</b>	Visualisations missing or irrelevant.  <i>0–2 marks</i>	Limited or unclear visualisations that confuse information.  <i>3–4 marks</i>	Clear graphs and visualisations are presented.  <i>5–7 marks</i>	Clear visualisations presented using appropriate Python tools (e.g., Matplotlib, Seaborn, Plotly).  <i>8–10 marks</i>	

Criterion	Missing / Unacceptable	Poor	Good	Excellent	Marks
<b>Advanced Analytics and Discussion (CLO3)</b>	No advanced analytics presented. Results are missing, irrelevant, or copied.  <i>0–7 marks</i>	Basic or incomplete analysis. Limited discussion of results, with minimal interpretation or weak connection to prediction goals. Prototype lacks functionality or clarity.  <i>8–15 marks</i>	Appropriate analytics are conducted using relevant machine learning models. Comparisons and evaluations are clear and supported with reasoning. Prototype is simple but functional, showing basic integration of results.  <i>16–22 marks</i>	Comprehensive and critical analysis. Models are effectively compared and justified with literature or evidence. Clear interpretation of results, limitations, and improvements discussed. Includes a functional prototype demonstrating real-world deployment or interactive results.  <i>23–30 marks</i>	
<b>Report Structure (CLO3)</b>	Report is incomprehensible, irrelevant, or poorly structured.  <i>0–1 mark</i>	Structure is weak and disorganised, making the report difficult to follow.  <i>2 marks</i>	Report structure is adequate, with a clear flow and reasonable organisation.  <i>3–4 marks</i>	Report structure is excellent, with smooth transitions, logical flow, and comprehensive organisation aligned with data science concepts.  <i>5 marks</i>	
<b>Presentation (CLO3)</b>	No presentation delivered, or presentation is incoherent and unprepared.  <i>0–1 mark</i>	Presentation is disorganised with minimal preparation. Team shows weak understanding or coordination. Attire and delivery lack professionalism.  <i>2 marks</i>	Presentation is clear and reasonably structured. All members participate and show understanding. Attire and delivery are appropriate with minor issues.  <i>3–4 marks</i>	Well-prepared and confident presentation with smooth coordination among members. Demonstrates clear understanding, professional attire, and strong delivery. Demo effectively supports the explanation.  <i>5 marks</i>	

**Remark:**

**TOTAL**

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