

Report Rubric

1. Methods (5 Marks)

- Clarity of the Research Question(s)
- Demonstrated understanding of the dataset, including key variables, relationships, and potential challenges.
- Data Pre-processing:
 - A minimum of 1 appropriate and justified data pre-processing technique
 - Effective application of the chosen technique(s), with explanations on how it improves the quality of the data for analysis
- Data Analysis:
 - A minimum of 2 robust and relevant data analysis methods
 - Use of well-designed visualizations to communicate key insights effectively
 - Correct interpretation of the results, logically connected to the research question(s).
- Use of Supervised/Unsupervised Methods:
 - A minimum of 2 well-justified machine learning models applied tailored to the research question(s).
 - Accurate and meaningful execution of machine learning techniques, with clear reasoning behind model choice and application.
 - Adequate employment of suitable evaluation techniques and metrics

2. Analysis of Data and Results (12 Marks)

- Quality and Variety of Results:
 - A thorough exploration of various aspects of the data
 - Comprehensive exploration of the data using a variety of analyses and methods A thorough exploration of various aspects of the data
 - Proper use of observation for interpretation
 - Thoughtful comparisons between different subgroups
 - Insightful examination of atypical data points
- Interpretation:
 - Well-developed links between analysis results and the characteristics of the dataset.
 - Extracting novel, thought-provoking insights from the data
 - Discussing potential real-world implications of findings
- Limitations:
 - Thoughtfully acknowledging and addressing limitations in data or methodologies
 - Insightful suggestion for analysis improvement

3. Report Quality (3 Marks)

- Executive Summary
- No missing section
- Overall writing quality
 - Exact use the instructed font, layout with proper use of indenting, and sectioning
 - Effective use of visual aids
 - Correct length of the report (10-12 pages)
- Logical Flow and Coherence
 - Smooth transition between ideas and sections
 - Clear progression from one point to the next
 - Cohesive flow between different sections

	Methods (5 marks)	Analysis of Data and Results (12 marks)	Report Quality (3 marks)
H1 (80%+)	<ul style="list-style-type: none"> Defines a clear, focused research question that sets a strong foundation for the entire analysis. Demonstrates a deep understanding of the dataset's characteristics, nuances, and potential biases. Expertly applies advanced data processing techniques, showcasing thoughtful consideration of appropriateness. Selects and deploys suitable machine learning methods with strong justification, correct implementation of tuning techniques. Strongly justified and perfect use of evaluation methods and metrics. 	<ul style="list-style-type: none"> Presents a rich and varied set of results with comprehensive exploration, using various visuals and analysis techniques. Provides in-depth, well-grounded interpretations that draw meaningful connections between analysis outcomes and dataset characteristics. Thoroughly acknowledges and discusses a wide range of limitations, showing astute awareness and insightful suggestions for improvement. 	<ul style="list-style-type: none"> Presents a concise yet comprehensive executive summary that effectively encapsulates the entire report. Ensures all sections of the report are comprehensive and well-covered, within the given length, leaving no important aspect unaddressed. Adheres precisely to formatting instructions, including font, layout, spacing, indenting, and sectioning; employs visualization effectively. Seamless sectioning, and an engaging narrative. Ensures an impeccable logical flow with smooth transitions, offering a seamless journey through the report's content.
H2 (70%-79%)	<ul style="list-style-type: none"> Formulates a well-defined research question that guides the analysis effectively. Shows a strong grasp of the dataset's key attributes and how they might impact the analysis. Skilfully employs a variety of data processing methods correctly with valid rationale. Expertly applies suitable machine learning techniques, demonstrating a clear rationale for their use. Correct and suitable use of evaluation methods and metrics. 	<ul style="list-style-type: none"> Displays a solid range of results with effective visual representations and insightful exploration. Offers insightful interpretations that demonstrate a clear understanding of the analysis results. Recognizes and addresses key limitations with thoughtful recommendations for refinement. 	<ul style="list-style-type: none"> Provides a clear executive summary that captures the key aspects of the report. Provides a mostly complete report, within the given length, covering all necessary sections with a few minor gaps. Generally, follows formatting instructions; uses indenting and sectioning appropriately; integrates visualization effectively. Demonstrates a high level of writing quality. Maintains a strong logical flow with coherent transitions between sections.
H3 (65%-69%)	<ul style="list-style-type: none"> Establishes a research question that provides adequate direction for the analysis. Presents a satisfactory understanding of the dataset's basic features but lacks in-depth exploration. 	<ul style="list-style-type: none"> Offers basic results with limited diversity in visualization methods and surface-level insights. Delivers satisfactory interpretations that connect some analysis outcomes to dataset aspects. 	<ul style="list-style-type: none"> Offers a satisfactory executive summary with the main highlights. Includes the essential sections of the report, though some may be briefly addressed.

	<ul style="list-style-type: none"> • Adequately utilizes common data processing techniques but may lack full justification for choices. • Adequately implements common machine learning methods but may lack detailed justification. • Use of some evaluation methods and metrics with limited justification and/or with some mistakes. 	<ul style="list-style-type: none"> • Identifies basic limitations and suggests straightforward improvements. 	<ul style="list-style-type: none"> • Presents a satisfactory writing style within the given length, with appropriate formatting and acceptable organization. • Establishes an acceptable logical flow, though some transitions may be slightly abrupt.
P (50%-64%)	<ul style="list-style-type: none"> • Presents a vague or overly broad research question that may lack focus. • Displays an adequate understanding of some dataset aspects, but major gaps exist. • Utilizes basic data processing methods, with limited rationale and justifications. • Implements basic machine learning approaches with limited reasoning for their selection. • Limited use evaluation methods and metrics without justification and/or with some significant mistakes. 	<ul style="list-style-type: none"> • Presents minimal results with limited visual support and shallow analysis. • Provides limited interpretations with minimal connection between analysis outcomes and dataset characteristics. • Mentions limitations superficially without comprehensive understanding, offering vague suggestions. 	<ul style="list-style-type: none"> • Delivers a basic executive summary that may lack conciseness and clarity. • May omit or inadequately cover crucial sections, leading to a somewhat incomplete report. Some differ from the given length. • Demonstrates a basic writing style but may lack consistent formatting or organization. • Displays limited logical flow, resulting in disjointed or unclear connections between sections.
F (less than 50%)	<ul style="list-style-type: none"> • Provides a poorly defined research question. • Offers weak interpretations lacking in depth, clarity and/or accuracy. • Utilizes limited data processing methods with minimal explanation of choices. • Utilizes limited machine learning methods with unclear rationale. • Invalid or no use of evaluation methods and metrics. 	<ul style="list-style-type: none"> • Presents rudimentary results with minimal analysis and visuals. • Offers weak interpretations that lack depth and clarity. • Fails to address or adequately acknowledge limitations. 	<ul style="list-style-type: none"> • Presents an inadequate or unclear executive summary. • Omits key sections, resulting in a significantly incomplete report. Significant difference from the given word count. • Displays poor writing quality, potentially leading to confusion or disorganization. • Presents a disjointed or incoherent structure.