Machine Learning Project - Rubric

⌄ Machine Learning Problem

13 points

Criteria Description

Machine Learning Problem

5. Target

13 points

The student formulates a machine learning problem, with no major or minor issues.

4. Acceptable

11.05 points

The student formulates a machine learning problem, with only minor issues.

3. Approaching

9.75 points

The student formulates a machine learning problem, but there are numerous minor issues.

2. Insufficient

8.45 points

The student to some extent inaccurately or partly formulates a machine learning problem. Major issues are present.

1. Unsatisfactory

0 points

The student does not adequately address the criteria and/or it is missing.

Problem

6.5 points

Criteria Description

States the problem using quantitative language and explain its importance.

5. Target   6.5 points

The student states the problem with no major or minor issues.

4. Acceptable   5.52 points

The student states the problem, with only minor issues.

3. Approaching   4.88 points

The student states the problem, but there are numerous minor issues.

2. Insufficient   4.23 points

The student to some extent inaccurately or partly states the problem. Major issues are present.

1. Unsatisfactory   0 points

The student does not adequately address the criteria and/or it is missing.

⌄ Approach

Criteria Description

Sketches the approach to solving the problem and the software tools used to implement the solution.

5. Target	13 points

The student sketches the approach, with no major or minor issues.

4. Acceptable	11.05 points

The student sketches the approach, with only minor issues.

3. Approaching	9.75 points

The student sketches the approach, but there are numerous minor issues.

2. Insufficient	8.45 points

The student to some extent inaccurately or partly sketches the approach. Major issues are present.

1. Unsatisfactory	0 points

The student does not adequately address the criteria and/or it is missing.

Theoretical (Algorithmic) Foundations

19.5 points

Criteria Description

Provides the theoretical (algorithmic) foundations of the solution.

5. Target

19.5 points

The student provides the theoretical (algorithmic) foundations, with no major or minor issues.

4. Acceptable

16.58 points

The student provides the theoretical (algorithmic) foundations, with only minor issues.

3. Approaching

14.63 points

The student provides the theoretical (algorithmic) foundations, but there are numerous minor issues.

2. Insufficient

12.68 points

The student to some extent inaccurately or partly provides the theoretical (algorithmic) foundations. Major issues are present.

1. Unsatisfactory

0 points

The student does not adequately address the criteria and/or it is missing.

Data set

13 points

Criteria Description

Includes code and detailed explanations.

5. Target

13 points

The student describes the data set used, with no major or minor issues.

4. Acceptable

11.05 points

The student describes the data set used, with only minor issues.

3. Approaching

9.75 points

The student describes the data set used but there are numerous minor issues.

2. Insufficient

8.45 points

The student to some extent inaccurately or partly describes the data set used. Major issues are present.

1. Unsatisfactory

0 points

The student does not adequately address the criteria and/or it is missing.

Implements Model

26 points

Criteria Description

Provides the complete code, its output, and explanations.

5. Target

26 points

The student implements the machine learning model, with no major or minor issues.

4. Acceptable

22.1 points

The student implements the machine learning model, with only minor issues.

3. Approaching

19.5 points

The student implements the machine learning model, but there are numerous minor issues.

2. Insufficient

16.9 points

The student to some extent inaccurately or partly implements the machine learning model. Major issues are present.

1. Unsatisfactory

0 points

The student does not adequately address the criteria and/or it is missing.

Results

Criteria Description

Summarizes the results of executing the code, describing the solution computed.

5. Target

13 points

The student summarizes the results, with no major or minor issues.

4. Acceptable

11.05 points

The student summarizes the results, with only minor issues.

3. Approaching

9.75 points

The student summarizes the results, but there are numerous minor issues.

2. Insufficient

8.45 points

The student to some extent inaccurately or partly summarizes the results. Major issues are present.

1. Unsatisfactory

0 points

The student does not adequately address the criteria and/or it is missing.

Documentation

26 points

Criteria Description

Writes a comprehensive technical report as a markdown document; Uses appropriate industry-standard technical writing throughout.

5. Target   26 points

The student provides professionally written documentation containing the following without any major or minor issues: Problem statement, algorithm of the solution, analysis of the findings, and references, as well as all code, code comments, outputs, plots, and analysis. There are no errors in formatting or documentation present.

4. Acceptable   22.1 points

Appropriate format and documentation are used with only minor errors. 1–2 elements below are lacking or incomplete: Problem statement, algorithm of the solution, analysis of the findings, and references, as well as all code, code comments, outputs, plots, and analysis.

3. Approaching   19.5 points

Appropriate format and documentation are used, although there are some obvious errors. 3–4 elements below are lacking or incomplete: Problem statement, algorithm of the solution, analysis of the findings, and references, as well as all code, code comments, outputs, plots, and analysis.

2. Insufficient   16.9 points

Appropriate format is attempted, but some elements are missing. Frequent errors in documentation of sources are evident. 5–6 elements below are lacking or incomplete: Problem statement, algorithm of the solution, analysis of the findings, and references, as well as all code, code comments, outputs, plots, and analysis.

1. Unsatisfactory   0 points

Appropriate format is not used. No documentation of sources is provided. All elements below are lacking or incomplete: Problem statement, algorithm of the solution, analysis of the findings, and references, as well as all code, code comments, outputs, plots and analysis.

Total 130 points