UCL
MECHANICAL ENGINEERING

MECH0107 – Data-Driven Methods for Engineers – CW2 Marking Rubric

Weight: 60%	A Excellent	B Very good	C Competent	D Marginally Accepted	F Unsatisfactory
Coursework Presentation and Structure (10%)	Excellent report presentation and academic writing style. The excellent organization makes the report very coherent and easily readable. All figures are plotted correctly with all required features: titles, axes labels and ticks, legends and the needed use of colours. No spelling, coding or mathematical errors spotted in the document.	Very good report presentation and structure ensuring clear flow and argument. Overall clear and well-written report. most figures are plotted correctly with all required features: titles, axes labels and ticks, legends and the needed use of colours. Trivial spelling, coding or mathematical errors spotted in the document that will not affect the quality of the work.	Good report structure and easy to follow. Some sentences and/or paragraphs are difficult to interpret. Some figures are plotted correctly with all required features: titles, axes labels and ticks, legends and the needed use of colours. Minor spelling, coding or mathematical errors spotted in the document, which some might affect the quality of the work.	The report is fairly written but lacks clarity. Some weaknesses in the organization make it difficult to read. Most of the sentences and/or paragraphs are difficult to interpret. Few figures are plotted correctly with all required features: titles, axes labels and ticks, legends and the needed use of colours. Minor to major spelling, coding or mathematical errors spotted in the document that certainly affect the quality of the work.	Unsatisfactory report writing and organization. It lacks coherence, clarity, and fundamental material. None of the figures are plotted correctly with no use of the required features: titles, axes labels and ticks, legends and the needed use of colours. Major spelling, coding or mathematical errors spotted in the document.
Description of the Surrogate Model Setup (10%)	Thorough and well-structured explanation of both GPR and NN surrogate models. Justifications for data sampling, preprocessing, and model design choices are detailed and well-reasoned.	Clear and well-organized description, but minor gaps in justifications or explanations. Some details may be missing but do not significantly affect clarity.	Adequate description, but some aspects lack detail, are underexplained, or lack proper justification.	Limited explanation of surrogate models, missing key justifications. Justifications are superficial or lack clarity.	Poor or missing explanation of surrogate models. Justifications are absent or incorrect.
Results (10%)	Comprehensive and clear error evaluation for both GPR and NN models. Correct Pareto front plots have been provided for both GPR and NN models.	Clear error evaluation, but with minor omissions or less depth in analysis. Pareto front plots have some minor inconsistencies.	Error evaluation is present but lacks depth or clarity. Pareto front plots have some significant inconsistencies (e.g. incorrect trend, unexpected points) or are incomplete.	Error evaluation is minimal. Missing or highly incorrect Pareto front plots.	No meaningful results section. Pareto front plots are missing or completely incorrect.
Discussion (20%)	Excellent discussion, fully addressing all prompts with clear justifications, quantitative analysis, and engineering reasoning. Strong comparison of surrogate models and critical evaluation of their suitability. Insightful consideration of practical constraints and model improvements.	Good discussion with well-supported arguments. Some quantitative analysis provided, but minor gaps in reasoning or depth of discussion.	Addresses most discussion points, but quantitative analysis is weak or only partially correct. Justifications lack depth.	Discussion is superficial, with missing or vague justifications. Minimal or incorrect quantitative analysis.	Poor or missing discussion. Answers are vague, incorrect, or missing quantitative analysis.
Quality of Code (10%)	The written code runs correctly and fully. The code is exceptionally well-written in a non-redundant, elegant, and well-structured manner. The overall coding style is of an excellent standard. Every line of code has its own full and simple explanatory comment associated with it. The code is fully understandable and can be easily build upon later on.	Most of the written code runs correctly. The code is clear, well-written, well-formatted. The overall coding style is of a good standard. Most of the lines are associated with well-explained comments. The code is mostly clear and understandable.	Most/part of the written code runs correctly. The code is reasonably well-written. There may be some errors in syntax or commands that could affect the quality of the work. The overall coding style is of a reasonable standard, but falls short of being good. Some lines are associated with reasonably explained comments. The code is partially clear but understandable to a certain extent.	The written code runs, but mostly incorrectly, or most of it does not run. The code is adequately or poorly written. There may be many errors in syntax or commands that affect the output of the code and quality of the work. Few lines are associated with poorly written, wordy, or badly formatted comments. The code is hardly understandable.	The written code does not execute or runs completely and/or incorrectly. code is poorly written and demonstrates a lack of knowledge of basic coding capabilities and syntax. There may be numerous errors in commands that significantly detract from the quality of the work. The overall coding style is sub-standard. Lack or no comments included in the code. The code cannot be understood.