COMP5310 Project Stage 2

Experiment, Quantify, Report

Overview

The objective of Stage 2 is to complete the analysis or model building to solve the problem you defined in Stage 1. Activities include: (1) defining an experiment setup; (2) implementing your proposed approach; and (3) evaluating and analysing your approach.

Report (15 marks)

Your report, no more than four pages in length, should describe the experimental setup, approach and results:

Section 1: Setup (2 points)

- State your research question(s). State null and alternative hypotheses.
- Describe how you will quantify reliability e.g. significance testing, confidence intervals. If appropriate, describe how you will measure effectiveness e.g. regression r-square, clustering V-measure, classification f1-score.
- Identify datasets and the data you derived from them.

Section 2: Approach (7 points)

- Describe your proposed model and any benchmark models for comparison:
    - Machine learning projects could focus on e.g. learning techniques, features, model tuning, parameter selection
    - Analysis projects could focus on e.g. how the analysis will answer your research questions, operational variables for analysis, method of analysis

Section 3: Results (4 points)

- Summarise results, reliability and comparison to any benchmark analyses or models.
- Critically analyse results e.g. limitations of data, setup or approach, characteristic errors, possible improvements

Section 4: Conclusion (2 points)

- Conclude with what you have learned from this study which would improve yourself as a data analyst. Would you recommend this as a solution to your problem? Provide reasons.

The report is worth 15% of the overall mark for COMP5310. It will be marked on clarity of research question, evaluation framework, approach/implementation, discussion of results and quality of analysis. The report should use the high level headings above – setup, approach, results and conclusion. It should use line spacing of at least 1.15 and body font size of at least 10pt.

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Report Marking Criteria	Marks
Setup – Clarity and Specificity of Research Question(s)	0 – 1
Setup – Quantification of Reliability	0 – 1
Approach – Correctness, Completeness and Complexity	0 – 7
Results – Presentation	0 – 2
Results – Critical Analysis	0 – 2
Conclusion – Conciseness and Recommendations	0 – 2
TOTAL	15

Presentation (during normal lecture and tutorial of Week 12)   (5 marks)

The presentation is worth 5% of the overall mark for COMP5310. It will be marked on content, style and timing. A time limit will be strictly enforced. Please practise!

Demonstration Marking Criteria	Marks
Content	0 – 2
Style	0 – 2
Timing	0 – 1
TOTAL	5