Rubrics Big Data & AI Project: Phase 1 Design & Phase 2 Proof of Concept

1. Students will be awarded one of the following marks for each component on this form:

Letter	Explanation	Score
U	Unsatisfactory	20
D	Doubtful	40
S	Satisfactory	60
G	Good	80
E	Excellent	100

2. The supervising lecturer will explain his assessment using the points for attention mentioned for the assessment aspect in question;
3. The final grade for phase 1 of the Project will be 30% deliverable A + 40% deliverable B + 30% deliverable C
4. The final grade for phase 2 of the Project will be 50% deliverable D + 50% deliverable E
5. A satisfactory assessment will only be possible if the following requirements have been met at the very least:

Deliverable A:

- A (link to the) cleaned dataset
- A data analysis report including dataset analysis, dataset visualization and explanation of the cleaning methods used for the dataset

Deliverable B:

- A (link to the) trained AI model
- A report explaining the baseline performance expected of any model given the dataset, an overview of different models considered, an explanation of the reasoning behind the chosen model, and an explanation of the methods of implementing the chosen model.

Deliverable C:

- A report containing a graphical design for the Proof of Concept, a technical design, and a functional design.

Deliverable D:

- A link to the Git repository containing the codebase of the project
- A video of a demonstration of the Proof of Concept
- Any slides used for the demonstration.

Deliverable E:

- A report containing a project introduction, literature review of relevant research articles, methodology, conclusions, discussion, and a completed Customer satisfaction form.
- **OR** a research article containing a cover page, abstract, introduction, background section, methodology section, result section, conclusion and discussion. Additionally, a research article needs to be proof-read by a

published author, who needs to give their written approval regarding the quality and publish-ability of the research article.

6. The marks for each deliverable will be established on the basis of the weighted average of the different assessment aspects. If any aspect sounds double/triple, it will be mentioned. A satisfactory assessment will only be possible if the following requirements have been met at the very least for each deliverable:
    a. A maximum of two components have been assessed as 'D'; the other components have been assessed as 'S' at the very least;
    b. None of the components have been assessed as 'U'.
    c. The weighted average is 55 or higher.
    d. The group has participated in a peer-review session prior to submitting the deliverable.

Deliverable A: Dataset					
1. Dataset analysis *(counts 2x)*	U	D	S	G	E
- Explain the content of the dataset. Details on format are provided as well as explanations of data collection method. - The dataset is thoroughly analysed, both quantitatively and qualitatively. This includes explaining all features, all classes, all datatypes, all ranges of values, and all annotations if present.	Explanation:				
2. Dataset visualization	U	D	S	G	E
- Data is visualized for the purpose of better understanding the dataset. Special attention is given to median/average datapoints and outliers.	Explanation:				
3. Cleaning of dataset *(counts 2x)*	U	D	S	G	E
- Explain how you transformed/pre-processed your raw dataset to be usable for training a model. - Explain any use of data augmentation or lack thereof - Explain choices regarding any removal of datapoints or lack thereof	Explanation:				
Total:					

Deliverable B: Model					
1. Model performance	U	D	S	G	E
- Explain what a baseline accuracy is of any "dumb" model, on your data. For example; if you are classifying data, your baseline accuracy is the accuracy you achieve when always predicting the most common class.	Explanation:				

- Analyse your model's performance. Discuss area's on which the performance could be improved.					
2. Model selection	U	D	S	G	E
- Compare different models suitable to your data and problem. Discuss pro's & cons of each of them. Make sure to use proper references. - Explain why you choose your model.	Explanation:				
3. Model implementation	U	D	S	G	E
- Explain how you implemented your chosen model. Discuss any necessary data transformations or deployment choices. Make sure to show code of proper quality. - Explain your choices regarding model parameters.	Explanation:				
Total:					

Deliverable C: TGFD					
1. Graphical design	U	D	S	G	E
- The proposed proof-of-concept has been designed using a graphical design using a prototype/click model in Axure/XD/Figma or similar. - The proposed graphical design shows creativity. - The proposed graphical design covers multiple pages and buttons.	Explanation:				
2. Technical design	U	D	S	G	E
- The proposed proof-of-concept has been designed using a technical design, meaning an explanation of the tool stack that is going to be used for the architecture of your proof-of-concept. - Multiple tools are incorporated in the design. - Special explanation is put into the tools necessary of deployment of the model.	Explanation:				
3. Functional design	U	D	S	G	E
- The proposed proof-of-concept has been designed with a functional design using UML diagrams. - Process, Activity and Use case diagrams are used to explain the desired 'flow' of the application.	Explanation:				

- Class, Sequence & State diagrams are used to explain the desired structure of the code of the application.	
Total:	

Deliverable D: Proof of Concept					
1. Demonstration	U	D	S	G	E
- The proof-of-concept is intuitively to use - The proof-of-concept is visually pleasing - The proof-of-concept operates as expected - The proof-of-concept solves the issue/problem of the client - The proof-of-concept shows creativity and problem-solving skills through its complexity - The demonstration runs smoothly, the project is introduced and any necessary background information is provided as well as reflection on limitations of the proof-of-concept.	Explanation:				
2. Code quality & documentation	U	D	S	G	E
- The code contains comments throughout - The code is consistently and neatly formatted - The code is efficient - The documentation provides enough information to easily run the code/project - The documentation discusses version control of dependencies and libraries used	Explanation:				
Total:					

Deliverable E: Report / research article					
1. Literature review	U	D	S	G	E
- The report contains a brief but complete overview of the literature published on related research. - Sources used are from credible and relevant sources - Information is put into context and viewed with a critical attitude	Explanation:				
2. Research questions	U	D	S	G	E
- The relevant aspects of the problem have been adequately identified.	Explanation:				

- The research objective has been formulated correctly. - The research question has been formulated in specific terms. - The research question has been delineated in relevant sub-questions that together answer the research question. - There is logical coherence between the problem analysis, objective, research question and sub-questions.					
3. Methodology	U	D	S	G	E
- The choices made with regard to carrying out the research have been justified. - The product is the operationalization of the research question. - The product has been developed using a methodical approach, which is explained - The justification describes whether the product meets the quality requirements, as described in the requirements. - The product exhibits creativity.	Explanation:				
4. Conclusion & discussion	U	D	S	G	E
- The sub-conclusions answer the sub-questions. - The conclusion answers the research question and logically follows from the sub-questions and sub-conclusions. - The sub-conclusions and conclusion do not contain any new information. - The recommendations are connected to the conclusion and demonstrate that the student has vision (the ability to distance himself or herself from the product). - The relevant consequences for the client are clearly formulated in the recommendations.	Explanation:				
5. Reporting techniques	U	D	S	G	E
- The report has a logical structure and the central theme is clear (does not contain any repetitions). - The report is formulated in a clear, easy-to-understand and professional manner. - Spelling and grammar are correct. - The report is well presented (layout). - Sources have been referenced in accordance with APA guidelines.	Explanation:				
6. Customer satisfaction	U	D	S	G	E

- The customer satisfaction form is provided and proves a happy client. - The students reflect on the customer satisfaction form and explain their (dis)agreement on with client's opinion.	Explanation:
Total:	