

CSCE 411/811 Project Report Guideline & Grading Rubric

You need to submit the following two items via webhandin by **the deadline posted on Canvas**. Note that this is a **hard deadline**.

1. Your source code files (e.g., sql dump file, web app source code files, data analysis code, etc.) in a zip archive file. Your code should be well documented. Clearly show each step.
2. A typed document (in **pdf**) describing your project. See the project report guideline.

Naming convention for the zip file and the pdf:

- *your_last_name_FinalProject_SourceCode.zip*
- *your_last_name_FinalProject_Report.pdf*

Please use the following guideline to prepare your project report. Points will be deducted if the required IEEE formatting is not used.

- Length: **4 pages** (you can use additional pages to include figures, tables, etc.)
- Format: [IEEE](#)
- Structure of the report (see below)

Grading will be based on the scores stipulated in each section below. Both the **presentation of the report and the implementation** will be used for grading.

Your project implementation procedure and reported results **must be substantiated by the submitted code**. Your entire project should be reproducible. If we find significant difference between your reported project and your submitted code, points will be deducted accordingly.

You are required to create an **end-to-end Entity-Relationship (E-R) data analysis workflow**. It should have the following 3 components.

- E-R Database (well-designed following the steps of Data Modeling)
- Web Application
- Data Analysis & Visualization

Structure of the report (total points 100):

1. Abstract (2 points) – It must be well-written.
2. Introduction (3 points)
3. Project Description (15 points)
 - Short description of the project and what you aim to do.
 - Why is this problem important? Use citation, if any.
 - Why does it interest you?

- Use figures to represent the E-R data analysis workflow. Briefly describe each component.
4. Dataset (5 points)
 - Clearly describe your dataset (are the attributes/features numeric/text; for numeric data whether it is discrete/continuous/categorical)
 - Specify the type of data (structured/unstructured)
 - Provide the source of your dataset (web link).
 5. Data Modeling for storing data into Database (40 points)
 - Specify the type of database (RDBMS/NoSQL or hybrid)
 - Describe the data modeling steps for your dataset (conceptual, logical, physical) to store in the database
 - 5(a) Conceptual Modeling
 - 5(b) Logical Modeling
 - 5(b) Physical Modeling

Database should be well-designed. It should reflect your knowledge at the depth discussed in the lectures (See Lecture 13 – 17 slides).

6. Data Modeling for Analysis (15 points)
 - Describe and justify the type of analysis used in your project (Clustering, Anomaly/novelty detection, etc.)
 - If the data is text, what modeling techniques were used and why?
7. Data Modeling for Web-Based Visualization (15 points)
 - Specify the dimension of the data.
 - If data is high-dimensional, describe the dimensionality reduction technique used & justify
 - For web-based visualization what data models of D3 are used? Bar chart, pie chart, scatter plot, etc.?
 - Use figures to present your visualization and describe.
8. Conclusion & Future Work (5 points)
9. Acknowledgements (if any)
10. List of references. Points will be deducted if citations are not provided or not done incorrectly.
11. Appendix: You may use extra pages to add figures, tables, etc.