AIM 511 Machine Learning
Final Project Requirements

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1 Project

1.1 Overview

- This project accounts for 25% of the final grade.
- Group Size: minimum 2 - maximum 3 members
- Total marks: 30

1.2 Problem Statement

For the final project, students are required to choose their own problem statement and develop a machine learning model using the techniques and models taught in class. All code must be written from scratch, but students are allowed to use basic libraries such as **NumPy, Pandas, Matplotlib,** and **Seaborn** for data manipulation and visualization.

To ensure the quality and relevance of the project, students must submit their project idea in the **form** linked on LMS for approval by **11:59 PM on 31st October 2024**. Failure to do so will incur a penalty. The submitted ideas will be reviewed, and feedback will be provided. If the project is found to be unsuitable, students will be required to refine or change their idea accordingly.

1.2.1 Constraints

- Only numerical and/or categorical datasets are allowed.
- The problem statement should not be something very common. If so, you have to present an entirely different approach for the same.
- The models as part of the solution should be something that has been taught in the course. Any model over and above that is appreciated, but it is up to the team to cover all bases for using it. Failure to explain the same will be penalized.
- No two teams will be allowed to have the same problem statement

1.3 Submission requirements

Each team that chooses the project track will have to submit a report with all the work that the team wishes to be considered. The report is not to have code, except in cases where it is necessary to justify something.

1.4 Evaluation Criteria

- Code: 10 marks
    - ! EDA and inferences: 4 marks
    - ! Preprocessing: 3 marks
    - ! Models and results: 3 marks
- Viva: 20 marks

2 Research Paper

You can alternatively choose to write a research paper on at least **two** Machine learning concepts/topics discussed in the class so far. They have to be original and should not be plagiarized or AI generated.

The number of pages should be atleast SIX pages (without references) in the double-column single-spaced IEEE conference format in Latex: `https://www.ieee.org/conferences/publishing/templates.html`.

2.1 Evaluation Criteria

The paper will be evaluated based on

- Originality
- Clarity
- Analogies
- Correctness

3 Important dates

- **31st October 2024, 11:59 PM**: Choose paper/project and fill the form.
- **4th November 2024, 11:59 PM**: Final decision of problem statement.
- **8th December 2024, 11:59 PM**: Final submission of report/paper.