You have to implement one ML project during the semester which include following criteria.

Objective :

Create Complete ML project using Flask/ Fast API of given problem statement with neat and clean UI. The project includes a clean UI for data input and prediction visualization.

Project should Include following:

TASK	Title	Description	Execution Period	Evaluation Period
1	Problem Definition and Dataset Exploration	Problem statement, dataset summary, and initial observations.	1/12/25 to 6/12/25	8/12/25 to 12/12/25
2	Data Cleaning and Pre-processing	Handle missing values Identify and handle outliers. Encode categorical variables Normalize/scale numerical features. EDA	8/12/25 to 12/12/25	15/12/25 to 20/12/25
3	Model Creation	Find out appropriate algorithm for training for your dataset. Use Library for project also Implement selected Algorithm without use of Library.	15/12/25 to 20/12/25	22/12/25 to 27/12/25
4	Model Evaluation	Test the model on the test dataset and compute metrics. Check for overfitting or underfitting.	22/12/25 to 27/12/25	29/12/25 to 03/01/26
5	Advanced Model Training	Experiment with advanced models cross-validation to ensure model stability. Compare models based on validation metrics. Hyperparameter Tuning	29/12/25 to 03/01/26	05/01/26 to 10/01/26
6	Visualization of metrics and graph	Display all types of graph associated with performance metrics	05/01/26 to 10/01/26	12/01/26 to 17/01/26
7	Flask Project Setup	Learn How to setup project on Flask Create simple flask application which use form .	12/01/26 to 17/01/26	19/01/26 to 24/01/26
8	Create Front end	Create front end of your project. Generally for user to input data	19/01/26 to 24/01/26	26/01/26 to 31/01/26

9	Create backend	Setup backend to handle user request	26/01/26 to 31/01/26	02/02/26 to 07/02/26
10	Deployment	Final Project Deployment to available free hosting site.	02/02/26 to 07/02/26	09/02/26 to 14/02/26

Library for development:

You can used numpy, pandas, matplolib, plotly, sklearn, seaborn

Evaluation of Objective:

Evaluation of project will be done **in regular lab**. For every one objective have **one marks** for end semester evaluation.

Use any one dataset from following list:

1) Cardiovascular Disease Dataset (Healthcare) - https://www.kaggle.com/datasets/sulianova/cardiovascular-disease-dataset

2) Bank Marketing Campaign (Marketing) - https://archive.ics.uci.edu/dataset/222/bank+marketing

3) Insurance fraud data – https://support.minitab.com/en-us/datasets/getting-started-guide-data-sets/insurance-fraud-data/

4) Loan Default Prediction (Banking) https://www.kaggle.com/datasets/nikhil1e9/loan-default

5) Stock market Price prediction
   Use any free API to get data.