Data Pre-processing and Exploratory Data Analysis

Evaluation Components

Sr. No	Name of Evaluation Component	Marks
1	Lab Assignment	10
2	Mini Project Phase 1	10
3	ESE Final Project Demo	30

CA 1 Lab Assignments Rubrics

Lab Assignments Rubrics (10 Assignments)	10 Marks
Attendance 100% Attendance (3) 76-100% (2) Below 75% (1)	3
Performance Completion of task during lab with Comments and code explanation (3) Completion of task during lab without Comments and code explanation (2) Incomplete work in lab (1)	3
Submission (Timely (4) Delayed by 4 days (3) Delayed by 7 days (2) after 7 days (1)	4

CA 2 Mini-Project Phase-1 Rubrics

Mini-Project Phase 1 (26-08-2024)	**10**
Problem statement finalization	03
Clear identification of problem objectives	02
Raw original data/public data gathering	03/02
Dataset explanation	02

S. No	**Question**	**Marks**
1	Problem statement finalization	3
2	Clear identification of problem objectives	2
3	Raw original data/public data gathering	3
4	Dataset explanation	2

Sr. No	100%-80%	80% - 60-%	<60%
Data Pre-processing techniques and its explanation	Scraped Data Set	Public Ready data Set from certain agency	Kaggle or available data
EDA graphs and result Description	Basic Eda + Inferences drawn Every stage of the project is represented by graph	Basic EDA + 70% EDA with graphs	Missing on Basic as well as
Data wrangling and code modification	Missing data treatment, scaling likewise pre-processing steps, all modification attempted	Missing data treatment only, Modification is attempted but not successful	Use of Pre-processed data Modification not attempted

CA 3 ESE Final Project Demo Rubrics

ESE Final Project Demo	**30**
Data Pre-processing techniques and its explanation	05
EDA graphs and result Description	10
Data wrangling and code modification	10
Viva and Presentation skills	05

Rubrics for ESE

Sr. No	100%-80%	80% - 60-%	<60%
Data Pre-processing techniques and its explanation	Scraped Data Set	Public Ready data Set from certain agency	Kaggle or available data
EDA graphs and result Description	Basic Eda + Inferences drawn Every stage of the project is represented by graph	Basic EDA + 70% EDA with graphs	Missing on Basic as well as
Data wrangling and code modification	Missing data treatment, scaling likewise pre-processing steps, all modification attempted	Missing data treatment only, Modification is attempted but not successful	Use of Pre-processed data Modification not attempted
Viva and Presentation skills	Beautification, Self-Explanation via diagram, all viva questions attempted	Average quality outputs, no self-explanation of the diagram, no. of questions answered	Below average performance in viva and work

Sr No.	Lab Assignment	CO
1	To Implement Data Acquisition using different techniques	CO1
2	To perform Web Scraping using Beautiful Soup	CO1
3	To create Synthesized Datasets for Machine Learning Applications	CO2
4	To Perform Data Cleaning and Data Imputation techniques	CO2
5	To wrangle data by subsetting, indexing, and merging Datasets	CO2
6	Apply different scaling techniques (standard scaling, min-max scaling, robust scaling) to the dataset.	CO 3
7	Apply Basic EDA on given dataset	CO 3
8	Data Visualization: Plotting basic graphs Line plots, Bar Plots, Scatter Plots, Grid Plots, KDE plots, Violin plots, pair plots and joint plots using matplotlib and seaborn	CO 3
9	Data Encoding: One-hot encoding and Label Encoding	CO 4
10	Univariate Analysis and Bivariate Analysis: Scatter Plots: Plot scatter plots to examine relationships between pairs of numerical variables. Correlation Matrix: Compute and visualize the correlation matrix to understand linear relationships between numerical variables. Heatmaps: Use heatmaps to visualize the correlation matrix.	CO 4