SCHOOL OF COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE	DEPARTMENT OF COMPUTER SCIENCE ENGINEERING	
Program Name: B. Tech	**Assignment Type:** Lab	**Academic Year:** 2025-26
Course Coordinator Name	Dr.Vairachilai Shenbagavel	
Instructor(s) Name	Srinivas Komakula	
Course Code	23CA201SE402	**Course Title**	Explainable AI (P)
Year/Sem	III/V	**Regulation**	R24
Date and Day of Assignment	21-07-2025	**Time(s)**	09:00AM -05:00PM
Duration	2 Hours	**Applicable to Batch**	**23CSBTB31**

Assignment Number: 03

Q. No.	Question	Expected Time to complete
1	**Assignment Problem-1: Wine Quality Classification**	

Problem Statement:

The Wine dataset classifies wine quality using chemical attributes. LIME shows feature influences.

Tasks:

1. Load Wine dataset
2. Train Logistic Regression
3. Apply LIME
4. Visualize contributions
5. Discuss interpretability

   Deliverables:
- Code
- LIME explanation
- Report 200 words

2	**Assignment Problem -2: Breast Cancer Diagnosis**	

Problem Statement:

   Predicting benign vs malignant tumors requires transparency. LIME provides medical justification.

Tasks:

1. Load Breast Cancer dataset
2. Train Random Forest
3. Explain with LIME
4. Visualize features
5. Discuss medical context

   Deliverables:
- Code
- Outputs
- Medical report