# *DEPARTMENT OF COMPUTER SCIENCE*



**ASSIGNMENT 01**

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(CSC-21F-125)

SECTION: 8TH - C

COURSE NAME: MACHINE

LEARNINGSUBMITTED TO : MS.AQSA UMAR

## TOPIC 1: BANK LOAN REPAYMENT PREDICTION USING MACHINE LEARNING

### 1. Dataset Availability:

**Sources:**

* UCI Machine Learning Repository
* Public bank loan datasets from Kaggle (e.g., Loan Prediction Problem Dataset)
* Synthetic datasets generated for financial modelin

**2. Why this Topic?**

Loan default prediction is a major challenge for financial institutions. Accurate prediction can help reduce financial risks, ensure better loan approvals, and improve profitability.  
Machine learning models like Logistic Regression and Random Forest can be used to build predictive systems that evaluate the likelihood of loan repayment. This topic is highly relevant in the financial sector due to the growing demand for automated decision-making systems.

**3. Research Paper:**

**Title:** “Loan Default Prediction Using Machine Learning Algorithms”  
**Authors:** F M Ahosanul Haque  
**Year:** 2022  
**Link:** https://www.researchgate.net/publication/384886989\_Bank\_Loan\_Prediction\_Using\_Machine\_Learning\_Techniques/fulltext/670c8f48ab02417099704d5a/Bank-Loan-Prediction-Using-Machine-Learning-Techniques.pdf?origin=publication\_detail&\_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InB1YmxpY2F0aW9uIiwicGFnZSI6InB1YmxpY2F0aW9uRG93bmxvYWQiLCJwcmV2aW91c1BhZ2UiOiJwdWJsaWNhdGlvbiJ9fQ&\_\_cf\_chl\_tk=.GPT46\_EthcsE58XNnw0s9Q10iWkDOzvkeohGwXTFFk-1749234793-1.0.1.1-vHqVlgvIPkDqv4xwjPB1iICYoZKZel8jd.Egw9rLM4E

## Topic 2: Automated Essay Scoring using Natural Language Processing

### 1. Dataset Availability:

**Sources:**  
- Automated Student Assessment Prize (ASAP) dataset from Kaggle  
- Hewlett Foundation essay scoring dataset  
- TOEFL11 dataset

### 2. Why this Topic?

Manually grading essays is time-consuming and subjective.  
NLP models can automate the grading process, making it faster and more consistent.  
This topic has practical applications in education technology and e-learning platforms.

### 3. Research Paper:

**Title:** " Automated Essay Evaluation Using Natural Language and Machine Learning "  
**Authors:** HARSHANTHI GHANTA  
**Year:** 2019  
**Link:** https://csuepress.columbusstate.edu/cgi/viewcontent.cgi?params=/context/theses\_dissertations/article/1330/&path\_info=ghanta\_harshanthi.pdf