# 20CS32P1 - MACHINE LEARNING APPLICATIONS LABORATORY

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| Course Category: | Professional Core | Credits: | 1.5 |
| Course Type: | Practical | Lecture-Tutorial-Practical: | 0-0-3 |
| Prerequisite: | Basic knowledge in fundamentals of data mining algorithms, DBMS, Dataset Formats. | Sessional Evaluation:  Univ. Exam Evaluation:  Total Marks: | 40  60  100 |
| Objectives: | * To study various machine learning models for building Real-Time Applications. | | |

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| Course Outcomes | At the end of this lab session, the students will be able to identify and understand various machine learning algorithms to develop applications using Python. | |
| CO1 | Understand the basics of Encryption and Decryption Procedure of Cryptography. |
| Course Content | 1. Implementation of Email spam classification using Naïve Bayes Classifier with Python. 2. Implementation of image classification using Support Vector Machines with Python. 3. Predicting the salary of person based on experience using Linear Regression analysis with python. 4. Implementation of Lung Cancer Detection using Machine Learning algorithm with python. 5. Implementation of Language translation using Machine Learning algorithm with python. 6. Implement Chabot using python. 7. Implement Sentiment Analysis using Python. 8. Implement product recommendation system with sales data using python. 9. Implement image recognition system using python. 10. Implementation of Credit card fraud detection in machine learning using python. | |
| Text Books &  Reference  Books | 1. WEI-MENG LEE, Python Machine Learning, Wiley, 2019 2. Tom M. Mitchell, Machine Learning, India Edition 2013, McGraw Hill Education. 3. EthemAlpaydın, Introduction to machine learning, second edition, MIT press. 4. <https://www.askpython.com/python/examples/email-spam-classification> 5. <https://thecleverprogrammer.com/2020/05/17/email-spam-detection-with-machine-learning/> 6. <https://medium.com/analytics-vidhya/image-classification-using-machine-learning-support-vector-machine-svm-dc7a0ec92e01> 7. <https://www.kaggle.com/code/ashutoshvarma/image-classification-using-svm-92-accuracy/notebook> 8. <https://vitalflux.com/linear-regression-real-life-example/> 9. <https://techvidvan.com/tutorials/python-sentiment-analysis/> 10. <https://www.analyticsvidhya.com/blog/2022/07/sentiment-analysis-using-python/> 11. <https://towardsdatascience.com/similar-product-recommendations-data-to-deployment-970a085bafce> 12. <https://data-flair.training/blogs/credit-card-fraud-detection-python-machine-learning/> | |

**CO-PO Mapping:** 3-High Mapping, 2-Moderate Mapping, 1-Low Mapping, - -Not Mapping

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|  | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** | **PSO1** | **PSO2** | **PSO3** |
| **CO1** | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 3 | 1 |