MACHINE LEARNING USING PYTHON

DATE	**June 14, 2024 to June 20, 2024** **(Friday, Saturday, Tuesday, Wednesday, Thursday)**
VENUE	**Computer Lab 1 (406),** **4th Floor - Deen Dayal Upadhyaya College, Sector 3, Dwarka, Delhi**

SCHEDULE

Date	Time	Topic
14/06/2024	**Session 1** **(10:00 AM - 11:30 AM)**	Inaugural Session
14/06/2024	**11:30 AM - 12:00 PM**	Tea Break
14/06/2024	**Session 2** **(12:00 PM - 1:30 PM)**	Introduction to Machine Learning, Types of Data, Data Preprocessing
14/06/2024	**1:30 PM - 2:00 PM**	Lunch Break
14/06/2024	**Session 3** **(2:00 PM - 04:00 PM)**	Hands-on Session
14/06/2024	**4:00 PM - 4:30 PM**	Tea Break
15/06/2024	**Session 1** **(10:00 AM - 11:30 AM)**	Understanding classification: Definition, use cases, Classification algorithms: KNN, Decision Trees,
15/06/2024	**11:30 AM - 12:00 PM**	Tea Break
15/06/2024	**Session 2** **(12:00 PM - 1:30 PM)**	Naive Bayes Algorithm, Evaluation metrics: Accuracy, Confusion matrix, precision, recall, F1-score
15/06/2024	**1:30 PM - 2:00 PM**	Lunch Break
15/06/2024	**Session 3** **(2:00 PM - 04:00 PM)**	Implementing classification algorithms in Python using scikit-learn
15/06/2024	**4:00 PM - 4:30 PM**	Tea Break
18/06/2024	**Session 1** **(10:00 AM - 11:30 AM)**	Introduction to regression: Definition, use cases, Simple Linear Regression (Gradient Descent)
18/06/2024	**11:30 AM - 12:00 PM**	Tea Break
18/06/2024	**Session 2** **(12:00 PM - 1:30 PM)**	Multiple Linear Regression, Polynomial Regression

		evaluation metrics: MAE, MSE
18/06/2024	**1:30 PM - 2:00 PM**	Lunch Break
18/06/2024	**Session 3** **(2:00 PM - 04:00 PM)**	Implementing regression algorithms in Python using scikit-learn
18/06/2024	**4:00 PM - 4:30 PM**	Tea Break
19/06/2024	**Session 1** **(10:00 AM - 11:30 AM)**	Introduction to Artificial Neural Networks: Basics, structure, Perceptron model, Activation functions
19/06/2024	**11:30 AM - 12:00 PM**	Tea Break
19/06/2024	**Session 2** **(12:00 PM - 1:30 PM)**	Multilayer Perceptron model, Backpropagation
19/06/2024	**1:30 PM - 2:00 PM**	Lunch Break
19/06/2024	**Session 3** **(2:00 PM - 04:00 PM)**	Building an ANN in Python using libraries like TensorFlow or Keras
19/06/2024	**4:00 PM - 4:30 PM**	Tea Break
20/06/2024	**Session 1** **(10:00 AM - 11:30 AM)**	Introduction to clustering: Definition, use cases, evaluation metrics Clustering algorithms: K-means,
20/06/2024	**11:30 AM - 12:00 PM**	Tea Break
20/06/2024	**Session 2** **(12:00 PM - 1:30 PM)**	Hierarchical Clustering Apriori Algorithm
20/06/2024	**1:30 PM - 2:00 PM**	Lunch Break
20/06/2024	**Session 3** **(2:00 PM - 03:30 PM)**	Implementing clustering algorithms in Python using scikit-learn
20/06/2024	**03:30 PM - 04:00 PM**	Assessment Test and Feedback
20/06/2024	**4:00 PM - 4:30 PM**	Tea Break