AIML:21AM406 LessonPlan1 22 23

Contents

Prerequisite(s)
Topic
General Objective (GO)
Specific Objectives (SOs)
Mapping Table
Mind map and Summary
References (Books/Videos/Journals/Web references)

Department	Artificial Intelligence and Machine Learning
Degree & Semester:	B.Tech & S4
Course code & Title:	21AM406 & APPLIED MACHINE LEARNING
Unit Title:	INTRODUCTION
CO / Lesson No (GO):	1/1

Prerequisite(s)

Basics of Artificial Intelligence and Statistics

Topic

Learning – Types of Machine Learning – Supervised -Unsupervised Learning

General Objective (GO)

At the end of the class, Students will be able to understand machine learning and its types.

Specific Objectives (SOs)

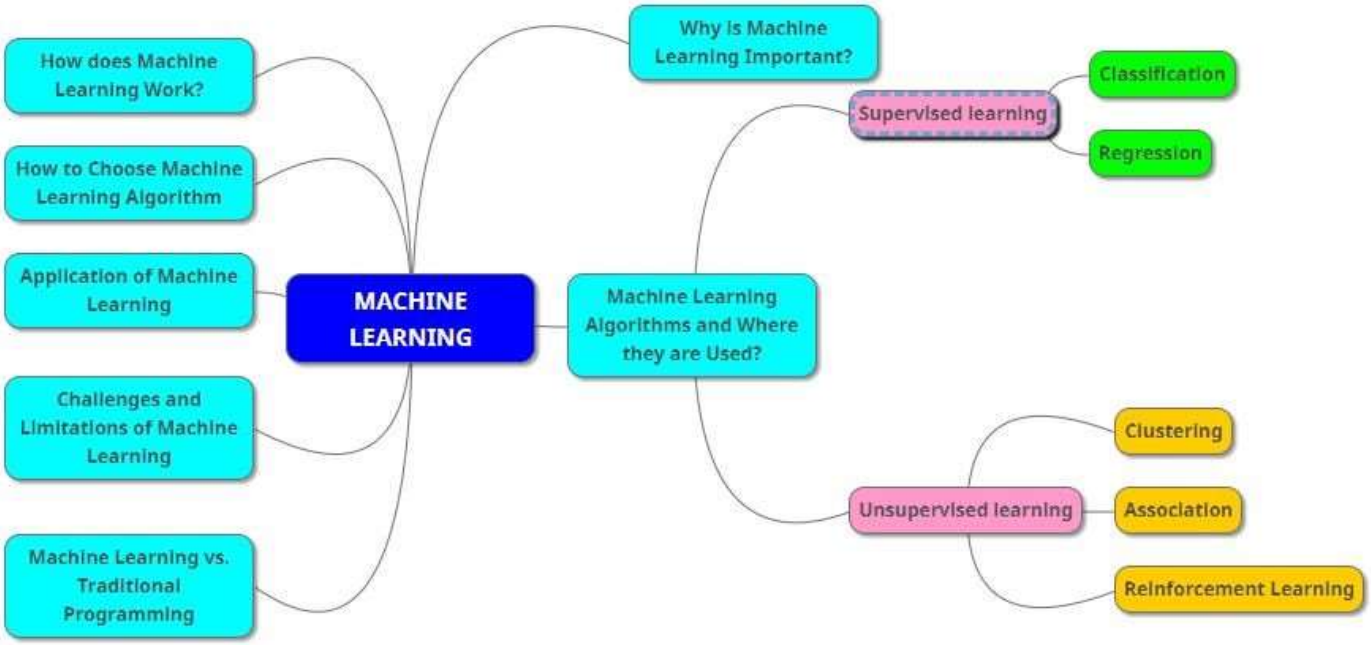
The students will be able to

1. Identify the need for Machine Learning with real life analogy. [U/C]
2. Classify the three types of Machine Learning. (U/C)
3. Interpret the history of Machine Learning and working mechanism of Machine Learning. (U/C)

Mapping Table

SO	PO	PO/PSO Competency	PO/PSO Indicator
SO1	1,2	1.1,2.1	1.1.1, 1.1.2,2.1.2,2.1.3
SO2	1,2	1.1,2.1	1.1.1, 1.1.2,2.1.2,2.1.3
SO3	1,3,4	1.2, 3.1,4.1	1.2.1, 3.1.1, 4.1.1

Mind map and Summary



Summary

- Machine Learning is a concept which allows the machine to learn from examples and experience, and that too without being explicitly programmed.
- So instead of you writing the code, what you do is you feed data to the generic algorithm, and the algorithm/machine builds the logic based on the given data.
- It uses the data to detect patterns in a dataset and adjust program actions accordingly and focuses on the development of computer programs that can teach themselves to grow and change when exposed to new data.
- It enables computers to find hidden insights using iterative algorithms without being explicitly programmed.
- Steps in Machine Learning
  - First step is data collection and this stage involves collecting data from all the relevant sources
  - Second step is data wrangling where the raw data is cleaned and converted
  - Next step is to analyze and filter the data
  - Next the algorithm is trained on the training dataset
  - After this the testing dataset determines the accuracy of our model
  - Then the model should be deployed in the real system
- Three types of Machine Learning
  - Supervised Learning
  - Unsupervised Learning
  - Reinforcement Learning

References (Books/Videos/Journals/Web references)

1. Ethem Alpaydin, —Introduction to Machine Learning 3e (Adaptive Computation and Machine Learning Series)ll, Third Edition, MIT Press, 2014
2. https://www.geeksforgeeks.org/machine-learning/
