

Machine Learning Weekly Assignment

1.SUPERVISED LEARNING

It is a method in which we teach the machine using labelled data. In this case the input and output are labelled data. The algorithm just needs to map the labelled input to the known output.

Example: A teacher in the school feeds her student with all questions and answers thereby preparing well for the exams. Here the student knows the answer of questions he/she just needs to correctly answer them.

2.UNSUPERVISED LEARNING

It is the method in which we teach the machine without any labelled data and any guidance. It should discover the hidden patterns and trend in the data and discover the output.

Example: The best example is a grown-up boy/girl, he/she doesn't want any guide to fulfil their needs they understand the situation and acts upon it.

3.REINFORCEMENT LEARNING

It is method in which an agent interacts with it's environment by producing actions and discover errors or rewards. It follows a trial - error method.

Example: A person who is stuck in an unknown place gradually cop with situations and search ways for survival. He learns what to do and what not to by experiencing each thing.

3.Classification vs Regression vs Clustering

Classification: -Classification algorithms are used to predict a label or a class.

Example: - A classification algorithm could be used to predict whether an email is spam or not.

Regression: - Regression algorithms are used to predict continuous quantity.

Example: A regression algorithm could be used to predict a price of a stock for a period of time.

Clustering: -The task of grouping data points based on their similarity with each other.

Example: You are given a list of customers and their information we need group them based on their similarity.