Week 6

Home learning task

Select one or more choices from the list of common Machine Learning Algorithms, do some investigations and write me a short summary. I am looking for the following:

K-Means

•Is it Supervised/Unsupervised/Reinforcement learning?

K Means is a clustering algorithm and is unsupervised learning.

Example prediction of sales.

•What does the algorithm do?

It divides the data into clusters by visualizing all the features of the data provided and groups them into clusters of similar properties. Then finds the centroid for each cluster which is equi distant from all the data within the cluster. There are different methods followed to determine the clusters and the distance between the clusters. K-Means helps reduce the distance between the points in the cluster and the distance between the centroids of the clusters. This is repeated until stability is reached in the position of the centroids.

•In which situations will it be most useful?

When we have unsupervised data.

•(Optional) Can you find any examples of where this algorithm has been used?

This algorithm can be used in recommendation software.

To predict sales.

In medical field to determine best treatment.