

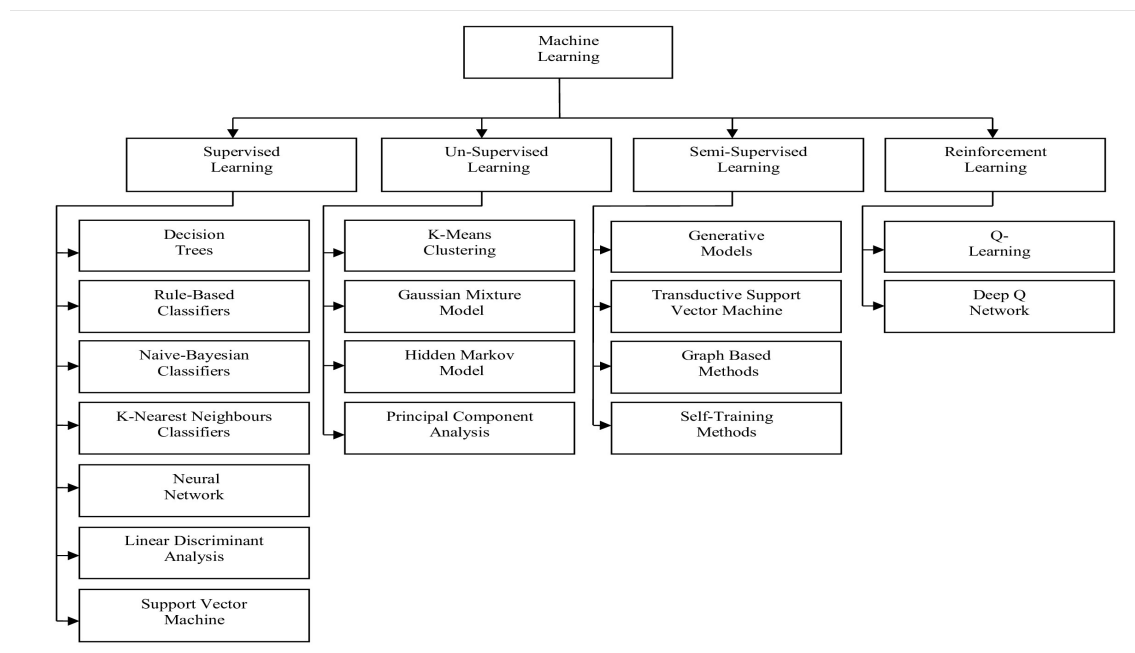
Summary of "A SURVEY ON MACHINE LEARNING APPROACHES AND ITS TECHNIQUES" by Thomas Rincy N and Dr. Roopam Gupta

IEEE International Students' Conference on Electrical, Electronics and Computer Science, 2020

Introduction :-

The paper delves into the realm of machine learning, which has become increasingly vital due to the abundance of data. It highlights machine learning's role in analyzing data and constructing algorithms to make predictions, bridging the gap in understanding. The authors explore various machine learning approaches and techniques, emphasizing their importance in different domains such as natural language processing and computer vision.

Methodology and Results:- This paper categorizes machine learning approaches into supervised, unsupervised, semi-supervised, and reinforcement learning. Supervised learning involves labelled training data, while unsupervised learning deals with unlabelled data and semi supervised learning is mixer of both labelled and unlabelled data.



Some Important ML Algorithms:-

Support Vector Machine:- It revolves around the margin on either side of the hyperplane that separates two data classes. To reduce an upper bound on generalization error, the main idea is to generate the largest available distance between its instance on either side and separating hyperplane.

Hidden Markov Model :- It is a parameterized distribution for sequences of observations. It defines a Markov process that is divided in two components – observable and unobservable components, in which actual states are not visited, these states are presumed to be unobserved or hidden, the state can be observed that is stochastically dependent on the unobserved state.

Principal Component Analysis:- It is an analytical procedure that converts the correlated variables into linearly uncorrelated variables, with the help of orthogonal transformation. The PCA is a multivariate dimensionality reduction tool that extracts the features representing most of the features in the information without losing the important information in the data.

Apart from these algorithms all the algorithms shown in the image are discussed in the paper in detail.

Conclusion:-

The paper provides a comprehensive overview of machine learning approaches and techniques. It highlights the significance of each approach and discusses various algorithms within each category. The author expresses an intent to further develop models based on these techniques indicating the ongoing evolution and importance of machine learning in diverse fields.

References:-

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