Support Vector Machine Algorithm

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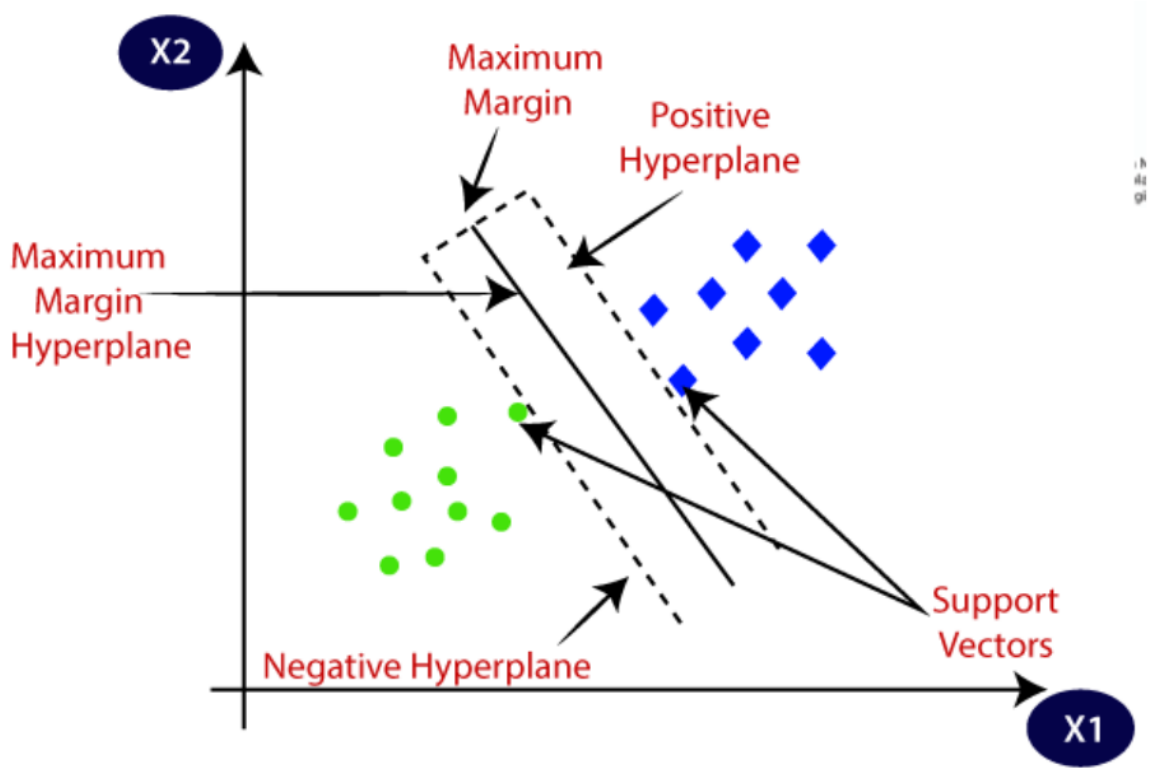
1] supervised learning algorithm

Svm → The goal of the SVM algorithm is to create the best line or decision boundary that can segregate n-dimensional space into classes so that we can easily put the new data point in the correct category in the future. This best decision boundary is called a hyperplane.



Hyperplane→There can be multiple lines/decision boundaries to segregate the classes in n-dimensional space ,but the best boundary is known as the hyperplane of SVM.

Support Vectors→The data points or vectors that are the closest to the hyperplane and which affect the position of the hyperplane are termed as Support Vector. Since these vectors support the hyperplane, hence called a Support vector.

margin→The distance between the vectors and the hyperplane is called as **margin**