

**Leaf Classification using SVM**

**Abstract**

A Support Vector Machine (SVM) is a discriminant classifier formally defined by a separating hyperplane. In other words, given labeled training data(supervised learning), the algorithm outputs an optimal hyperplane which categorizes new examples.

The leaf data set is taken from UCI ML repository. This data set consist in a collection of shape and texture features extracted from digital images of leaf specimens originating from total of 40 different plant species. Classifier model will be trained using this data set to classify the test data in one of the 36 predefined classes. The trained model will further help in accurate prediction of any leaf along with identification of diseases associated with it.

**Keywords:** SVM (Support Vector Machine), SVC, Machine Learning, Classifier, Optimization, Prediction, Minuteness, Generalization Bias.

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