

Social Network Advertisement

Situation | Problem definition: This project is all about predicting whether a customer will buy a given product or not on the basis of previous purchase of other customers (having features like age, salary etc.). Once we predicted that the given customer is a viable customer then we will send advertisement to him or her social media.

Task: Now the task was to come up with an efficient machine learning model which will result in maximum accuracy on a given data set.

Action: To this work in an organized way , I enlisted all the relevant machine learning classification machine learning algorithm on a paper which fits the problem like logistic regression, k-nearest neighbor, Support vector machine(linear kernel), Support vector machine, Decision Tree, Random forest. After that I started to analyze the performance of each model meticulously. Here is performance of each model.

- ❖ Logistic regression: 87%
- ❖ K-nearest neighbor: 93%
- ❖ SVM linear Kernel: 90%
- ❖ SVM RBF Kernel: 93%
- ❖ Decision Tree: 90%
- ❖ Random Forest: 90%

Result: Eventually we got the maximum accuracy of **93%** with the help of **KNN** (k-nearest neighbor) and **SVM RBF kernel**.