# SVM - Support Vector Machine

# Business Objective: classify the Size\_Categorie using SVM

Step 1: Read the excel file

Step 2: divide the train and test data.

Step 3: : Apply SVM function with kernel vaniladot method on output variable salar. Training error : 0

Step 4: Head of prediction

small large small small large large

Levels: large small

Step 5: forest\_predictions large small

large 48 3

small 6 110

Step 6: agreement

FALSE TRUE

9 158

Step 7: agreement

FALSE TRUE

0.05389222 0.94610778

Step 8: Kernel = polydot agreement\_poly

FALSE TRUE

9 158

Step 9:kernel = rbfdot agreement\_rbf

FALSE TRUE

40 127

Step 10: agreement\_rbf

FALSE TRUE

0.239521 0.760479

Conclusion: polydot gives a better value.

# Business Objective: Prepare a classification model using SVM for salary data

Step 1 : Combine the train and test data and read it

Step 2: Divide the data into train and test

Step 3: Apply SVM function with kernel vaniladot method on output variable salary. Training error : 0.153005

Step 4: predictions on testing dataset <=50K <=50K <=50K >50K <=50K <=50K

Levels: <=50K >50K

Step 5: table function is used to determine true and false Salary\_predictions <=50K >50K

<=50K 6905 1005

>50K 484 1385

Step 6: agreement

FALSE TRUE

1489 8290

Step 7: prob FALSE TRUE

0.1522651 0.8477349

Step 8: All 3 methods vaniladot, rbfdot,polydot shows same values of aggrement.