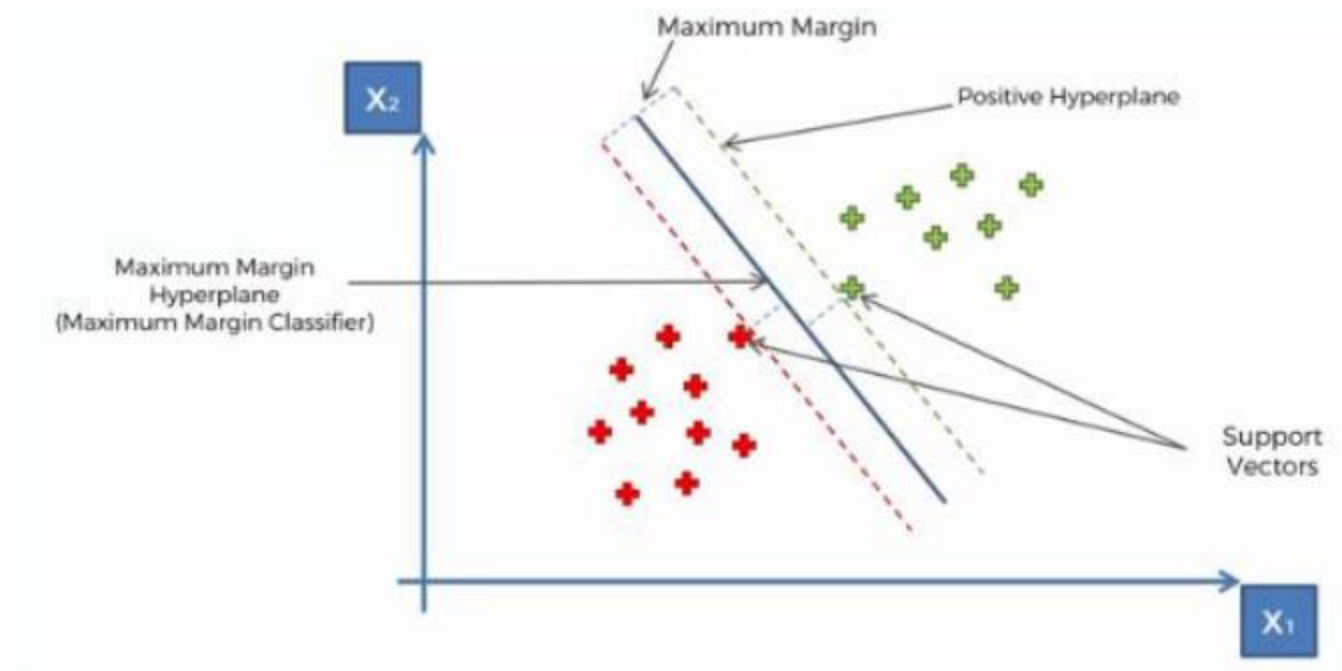# SVM - Classification

Diptangshu Banik

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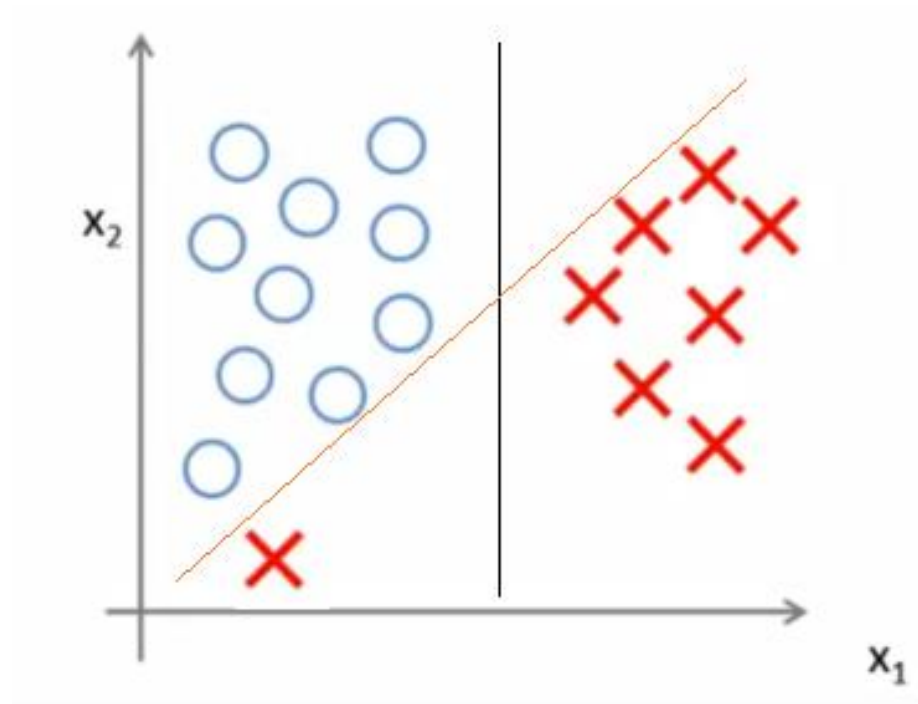
Supporting vectors are identified
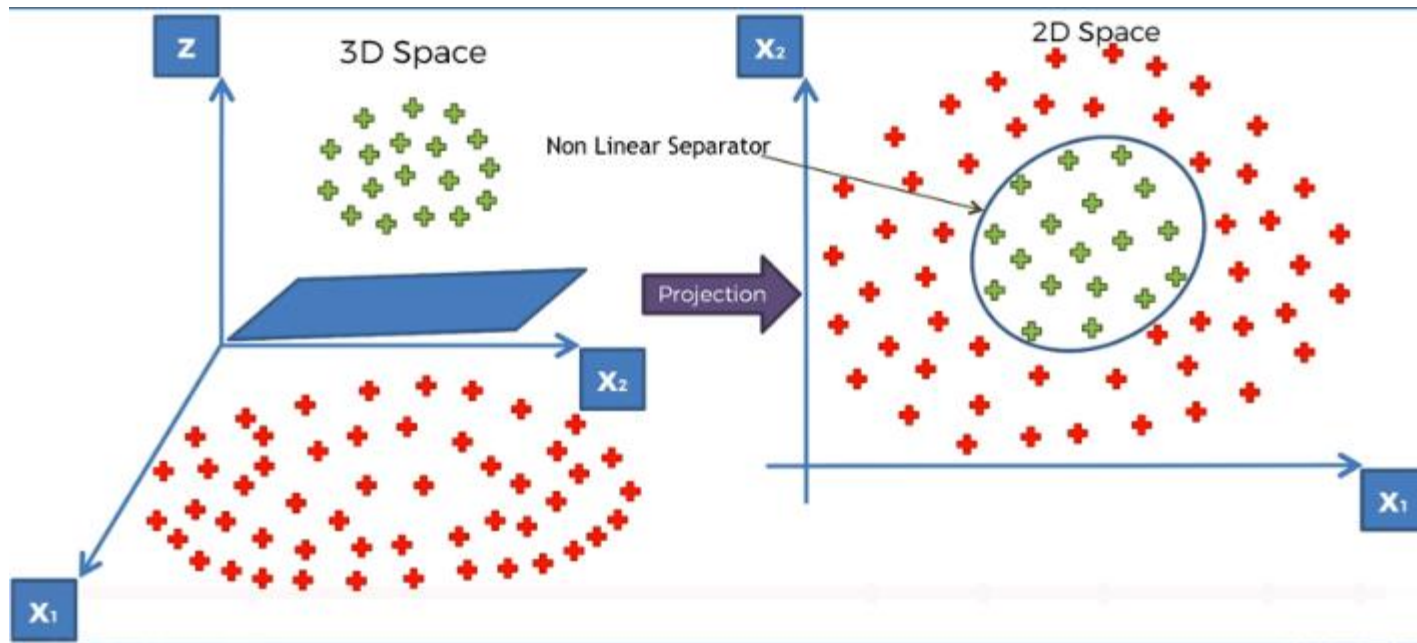
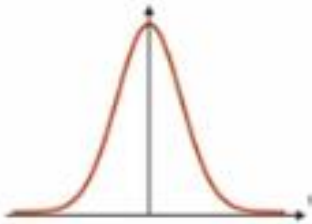#### • Value of C controls the influence of outliers.
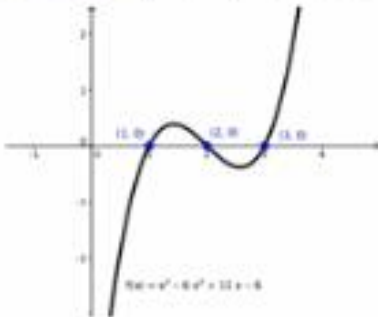
Convert Dimensions

- Kernels -

Gaussian RBF Kernel

$$K(\vec{x}, \vec{l}^i) = e^{-\frac{\|\vec{x} - \vec{l}^i\|^2}{2\sigma^2}}$$

Sigmoid Kernel

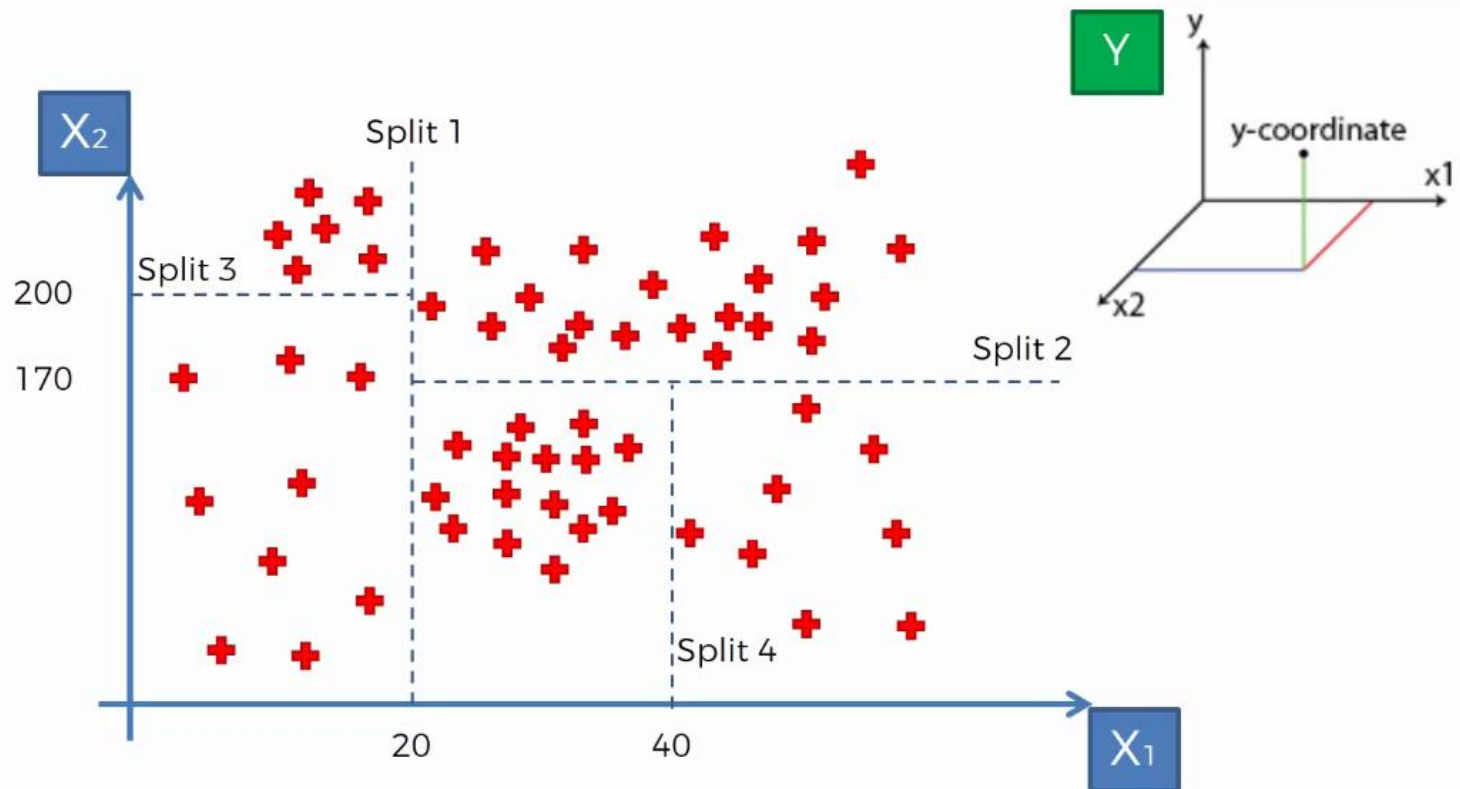$$K(X, Y) = \tanh(\gamma \cdot X^T Y + r)$$

Polynomial Kernel

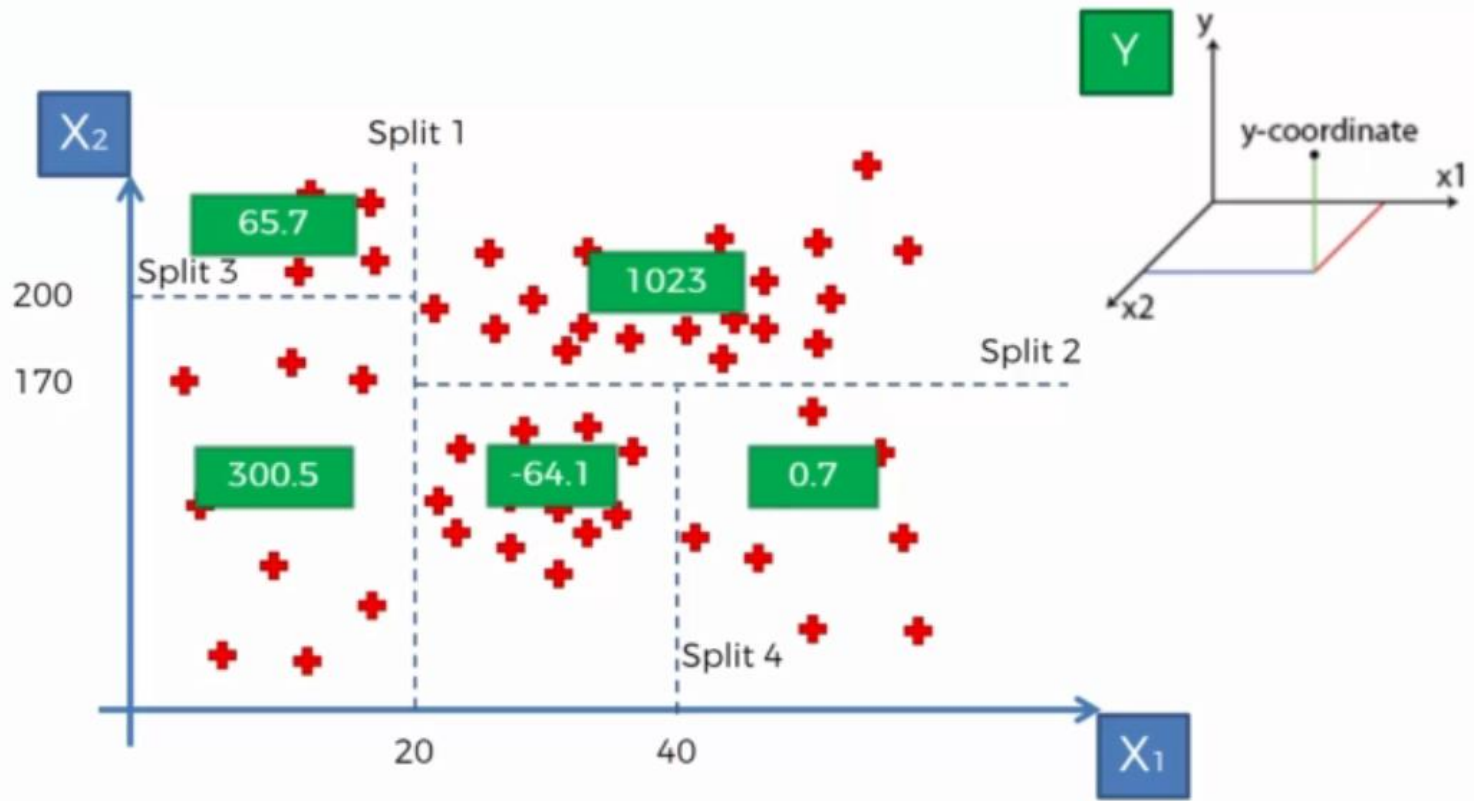$$K(X, Y) = (\gamma \cdot X^T Y + r)^d, \gamma > 0$$

Data representation DT

- Y is the output variable, kind of imaginary here as it is difficult to plot in a 2d setting

- Get the mean of every leaf and predict for (30,50) -

Tree representation –