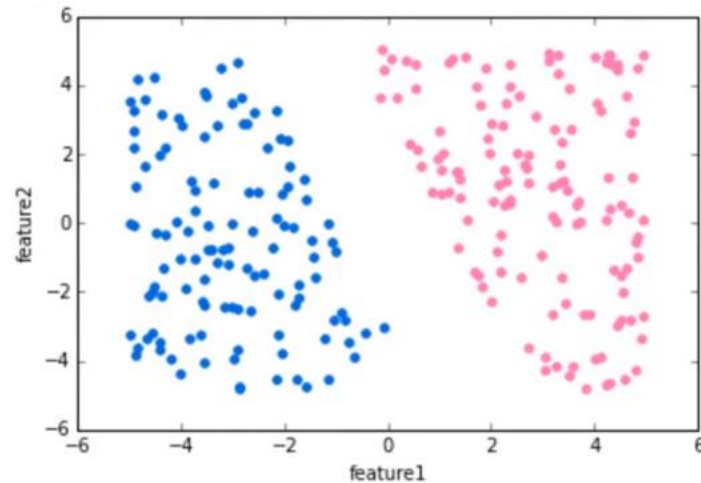
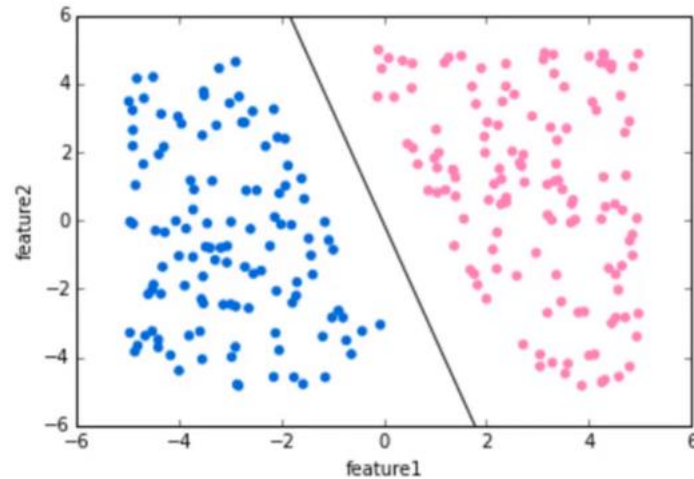


Introduction to Support Vector Machines

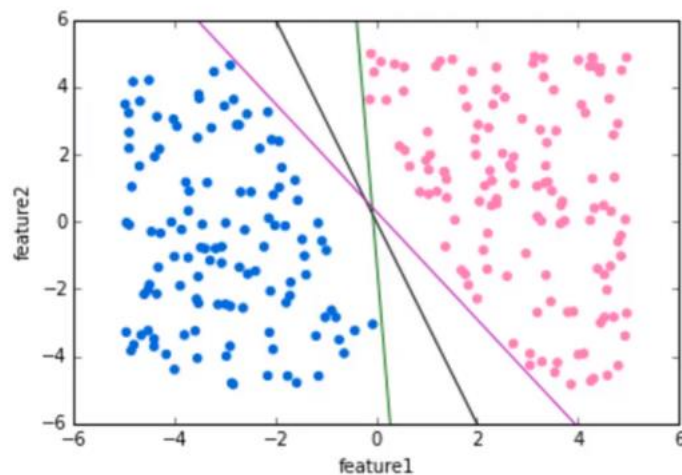
Let's show the basic intuition behind SVMs. Imagine the labeled training data below:



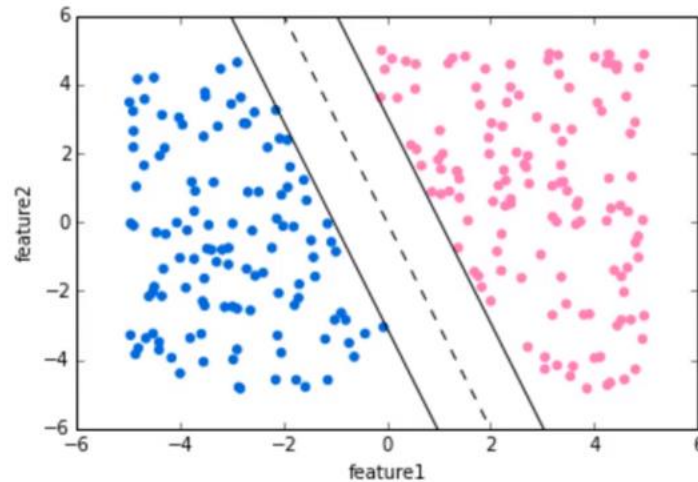
We can draw a separating “hyperplane” between the classes.



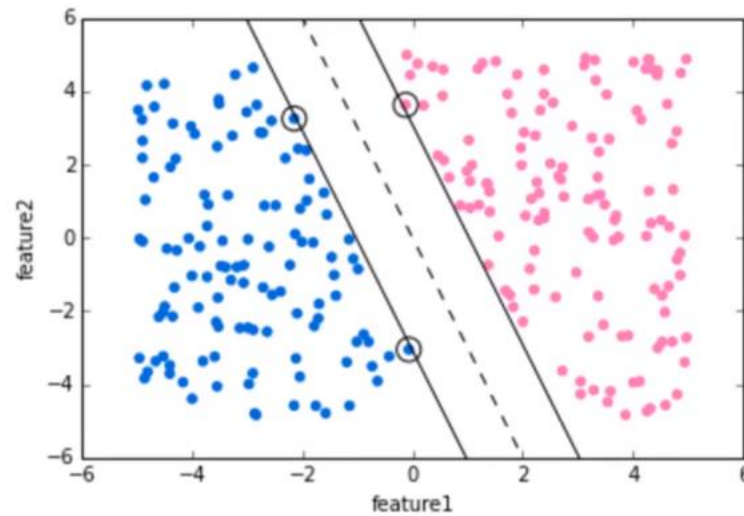
But we have many options of hyperplanes that separate perfectly...

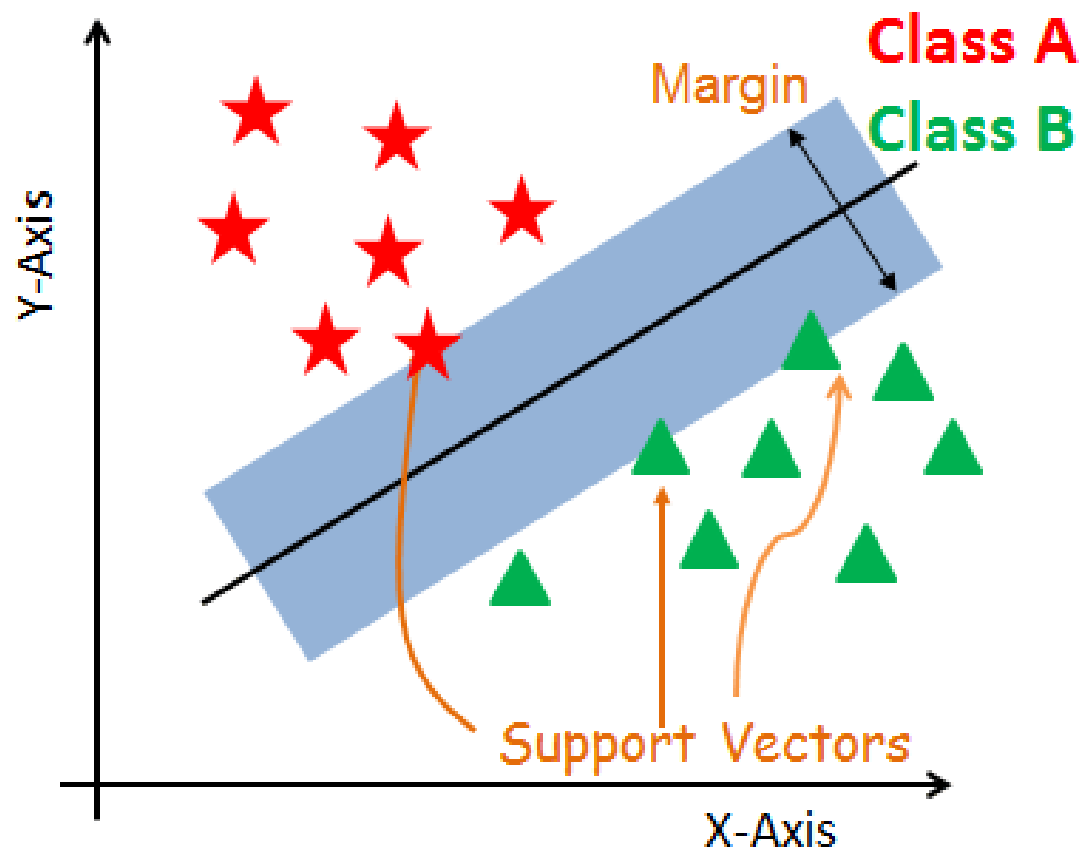


We would like to choose a hyperplane that maximizes the margin between classes

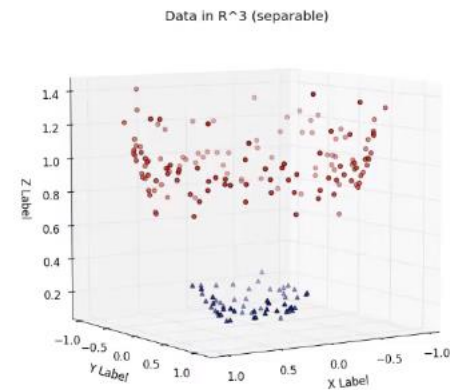
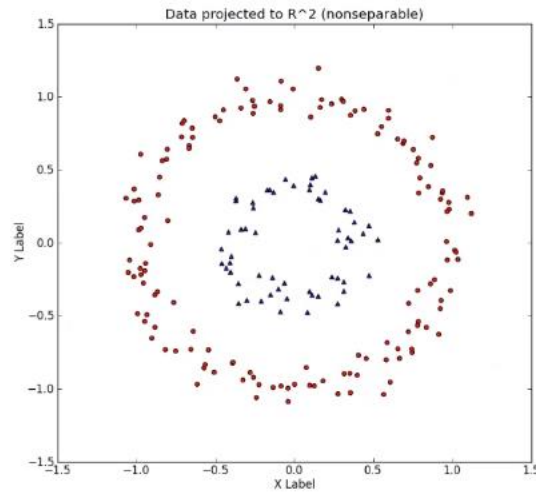


The vector points that the margin lines touch are known as Support Vectors.





We can expand this idea to non-linearly separable data through the “kernel trick”.



Check out YouTube for nice 3D Visualization videos explaining this idea. Refer to reading for math behind this.

