With certain types of data, we can create a line that partitions the space which puts a class a on either side of the line

Called a decision boundary

Create a line with the largest minimum distance between 2 classes

Support vectors and support planes

Minimizing distance from support vector to decision boundary is calculated with linear algebra

Non linear functions can’t be separated but may be mapped to linearly separable functions

Non linearly seperable data in lower space may be separated in higher space