**Support Vector Machines part 2**

Data transformation: we go from D to D’ with D’ > D. The idea is that we begin with a nonlinear feature space and by adding dimensionality we can transform it into a linear feature space 🡪 becomes a SVM (find hyperplane to separate points)

Kernel function: takes 2 vectors as input and returns something (for now). Informally, they are a measure of similarity between two vectors.

Eigenvectors stretch or compress the length of a vector. They keep the same direction, only that it reaches more or less distance depending on the value.

Advanced def of Kernel: a kernel is a couple of vectors which satisfy Mercer’s theorem, it being that their dot product exists in some other feature space. (that it’s positive semi-definitive)