

margin 2 of  $H_2$  is greater than other margin

So, the best hyperplane is  $H_2$ .

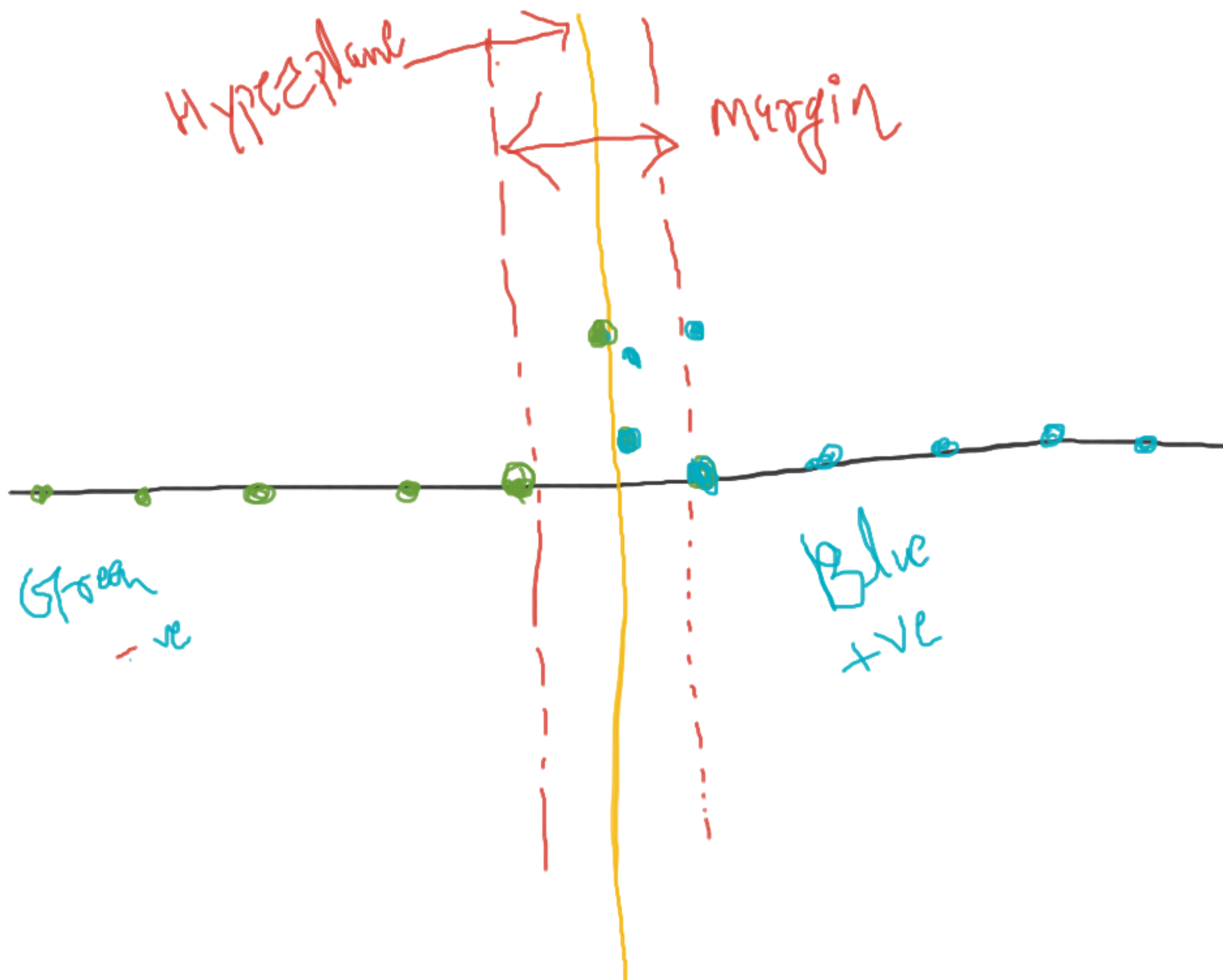
Due to which, best hyperplane will get decided or

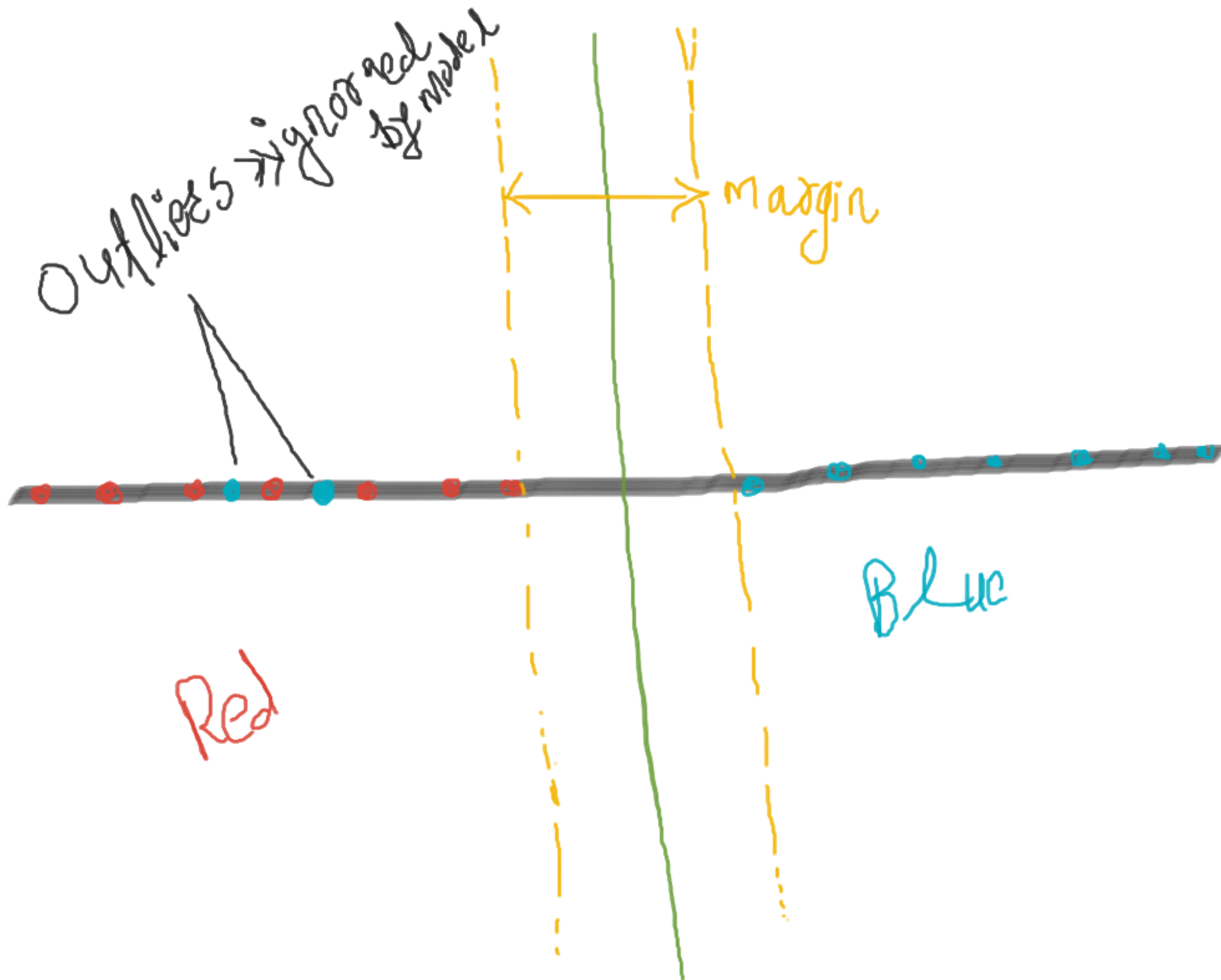
Decision Boundary will get decided.

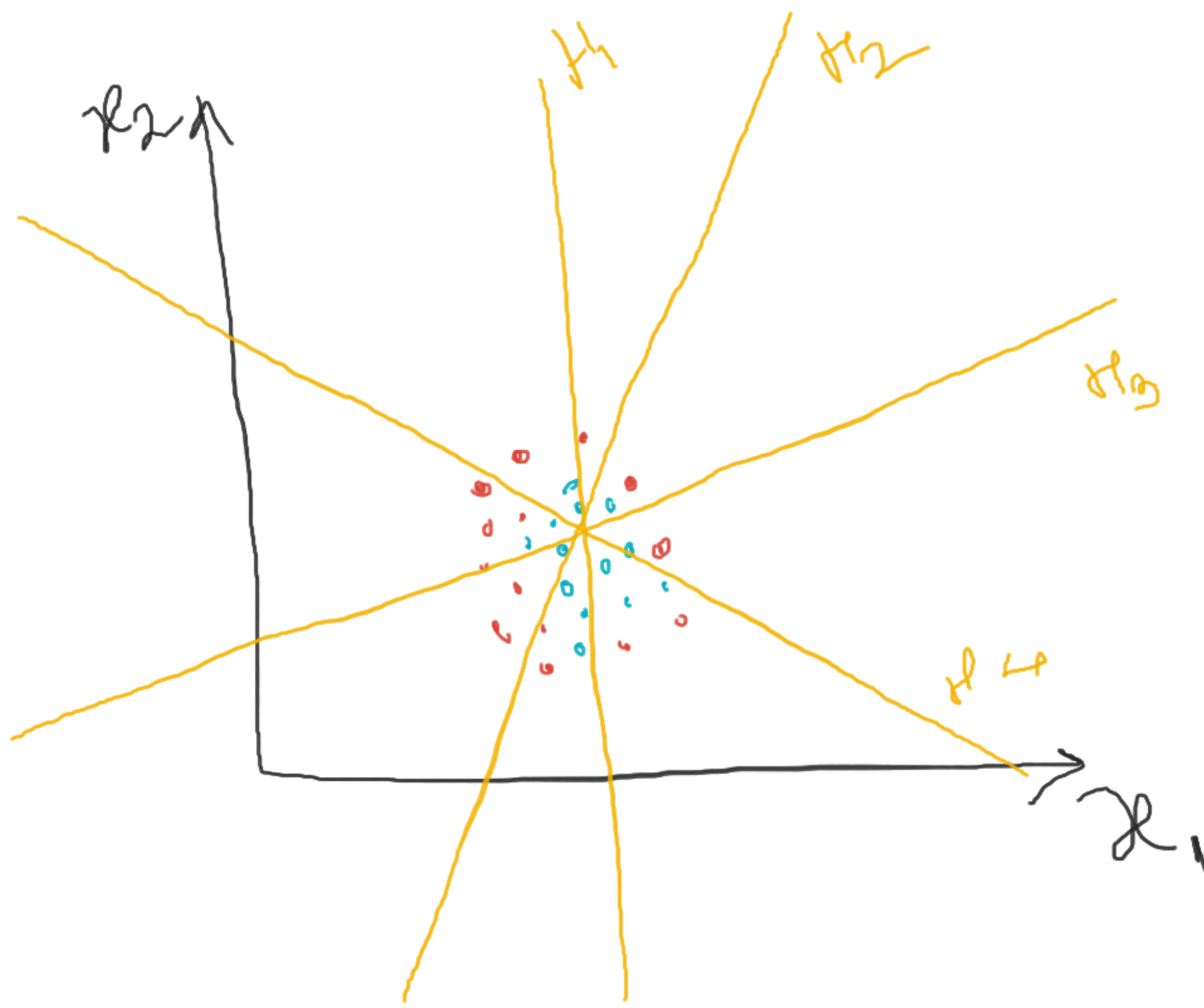
$H_1, H_2, H_3$

Best Hyperplane,  $H_2$ ,

margin 2 > margin 1, margin 3







2D  $\longrightarrow$  straight line

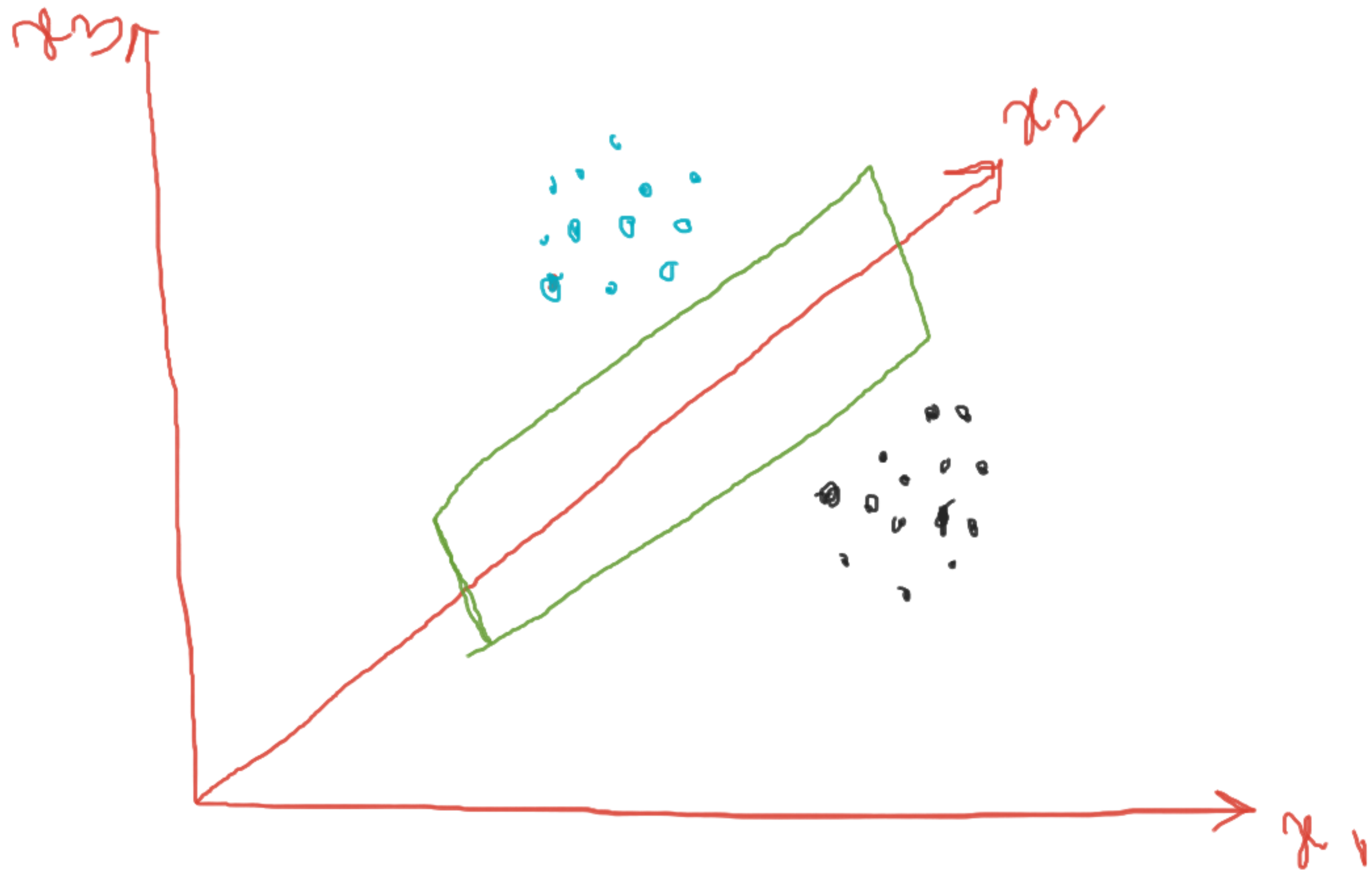
3D  $\longrightarrow$  2-D Hyperplane

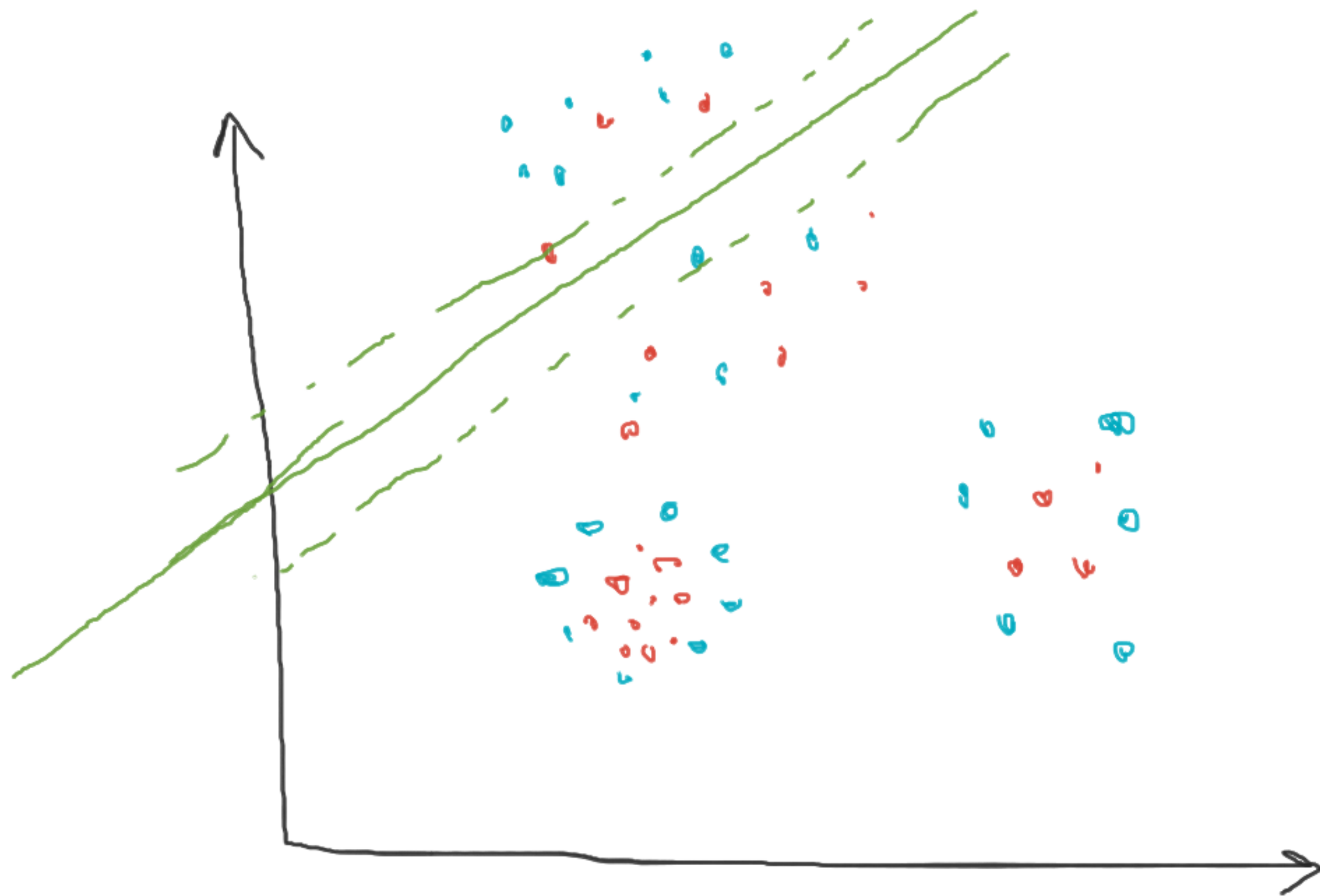
4D  $\longrightarrow$  3D Hyperplane

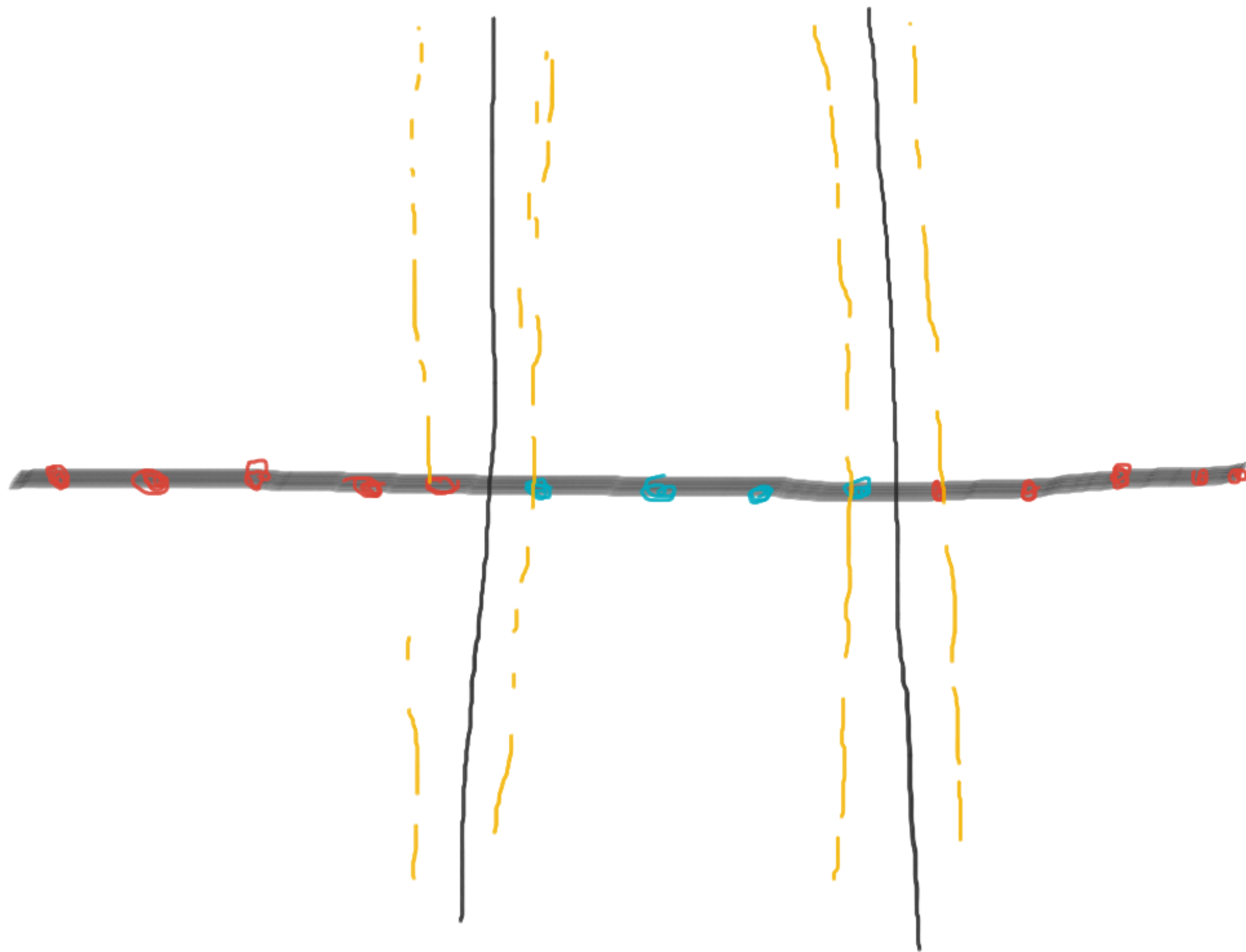










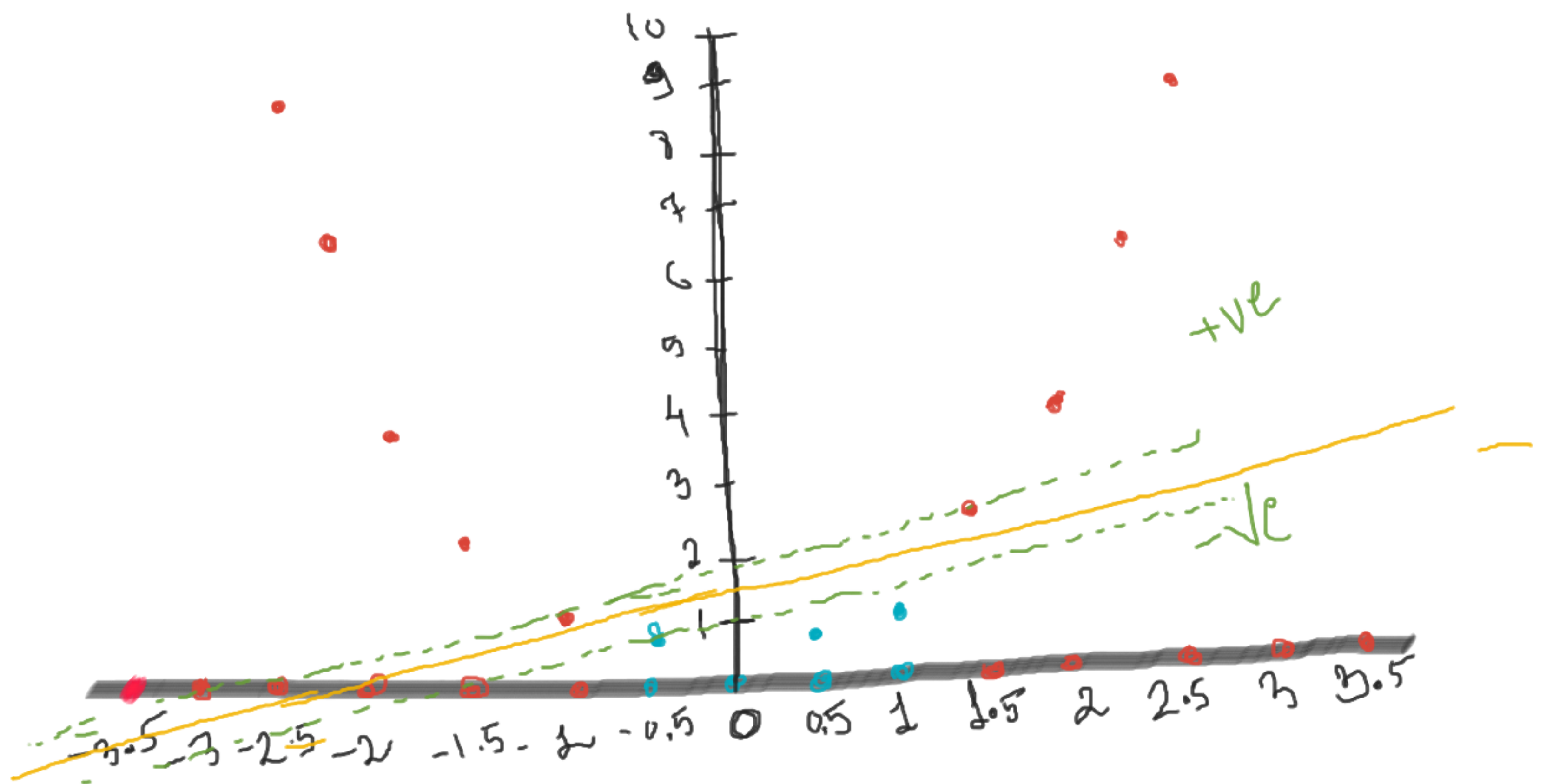


Kernels will help us to convert lower D data to higher dimensional data

Lower Dimension (1D)



Higher Dimension (2D)



$$f(x) = x^2 //$$

