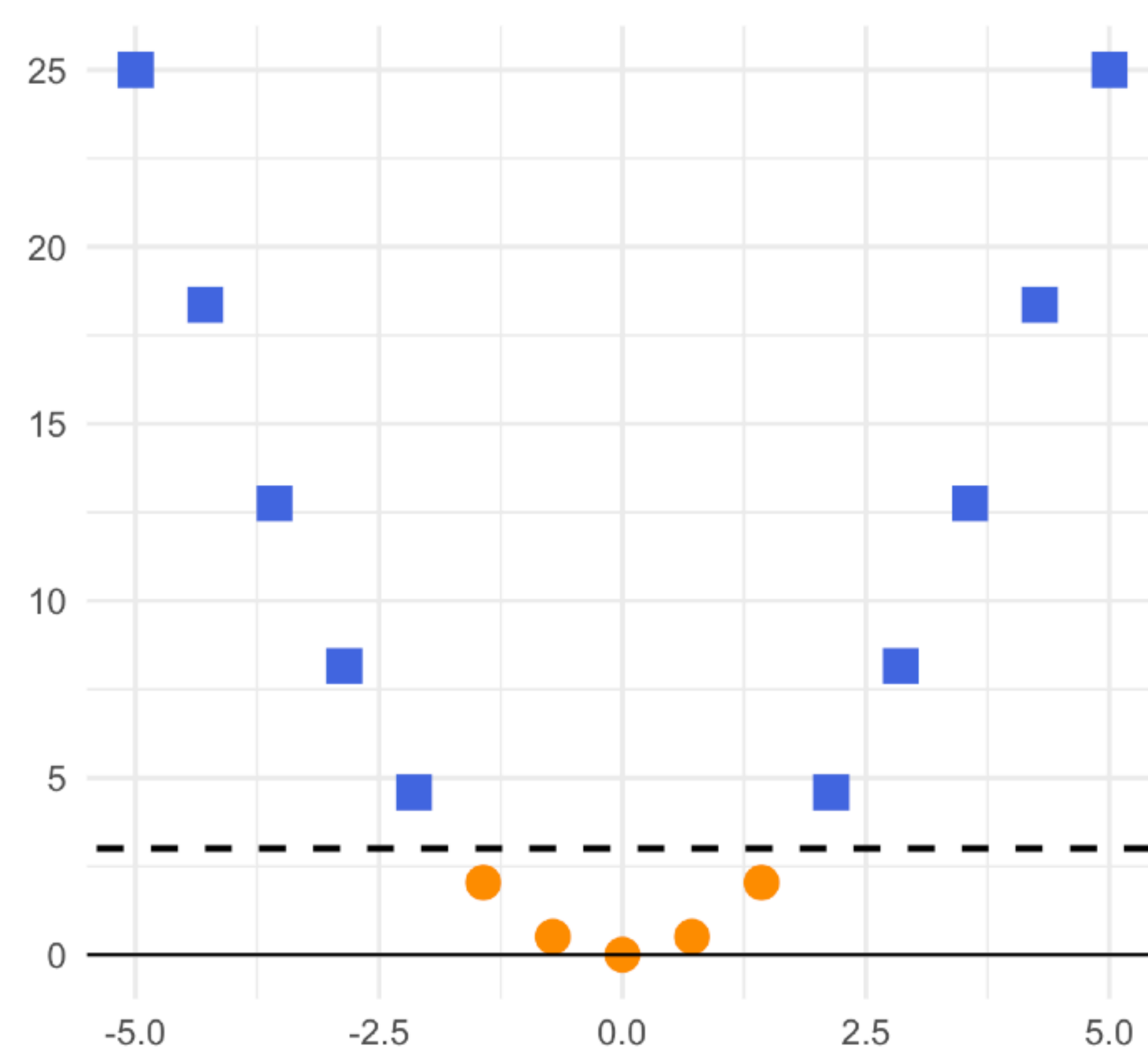
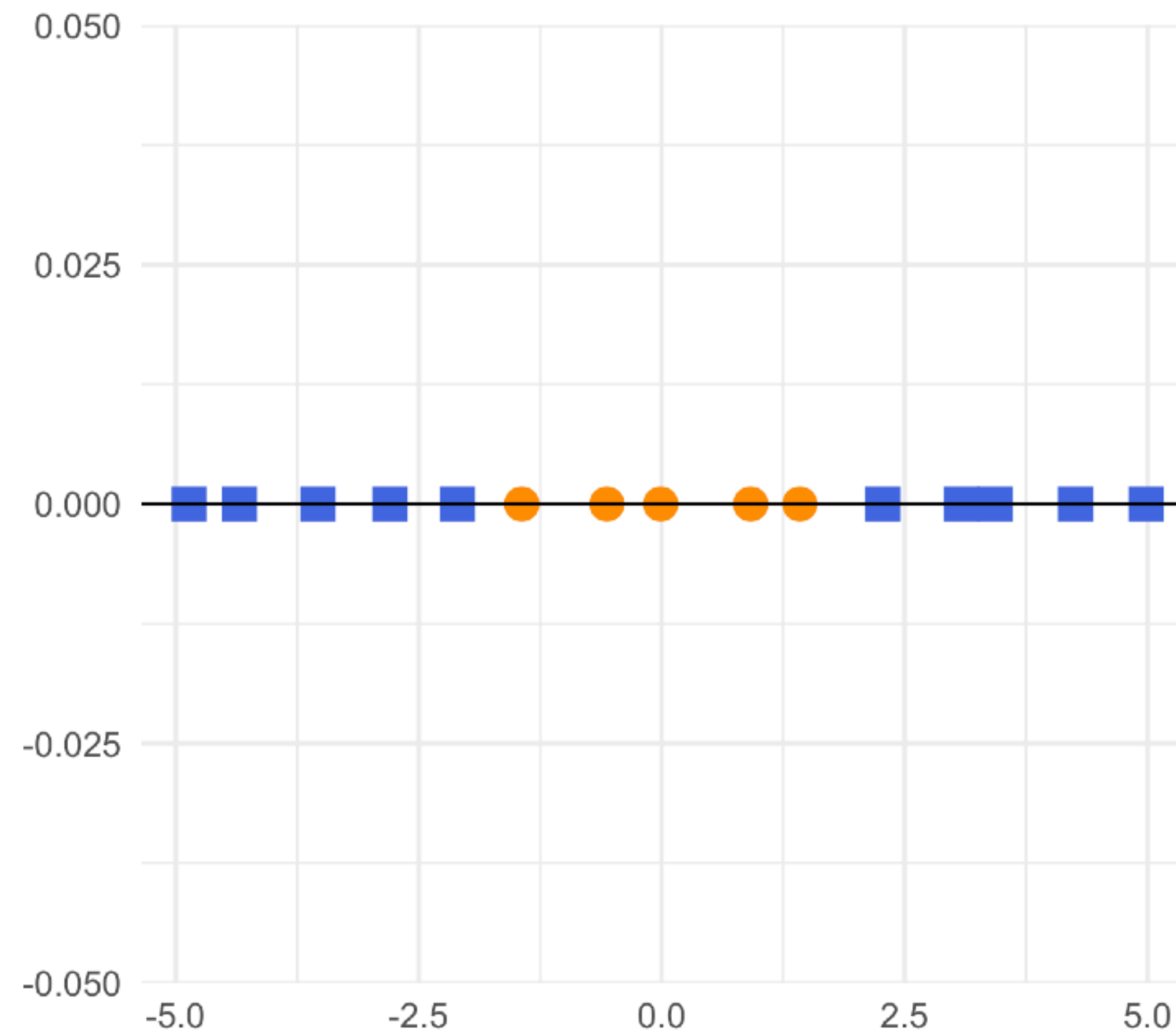


The Kernel Trick

what is an SVM Kernel?

A function that computes the relationship between vectors in multiple dimensions (without actually having to calculate the coordinates for those dimensions)

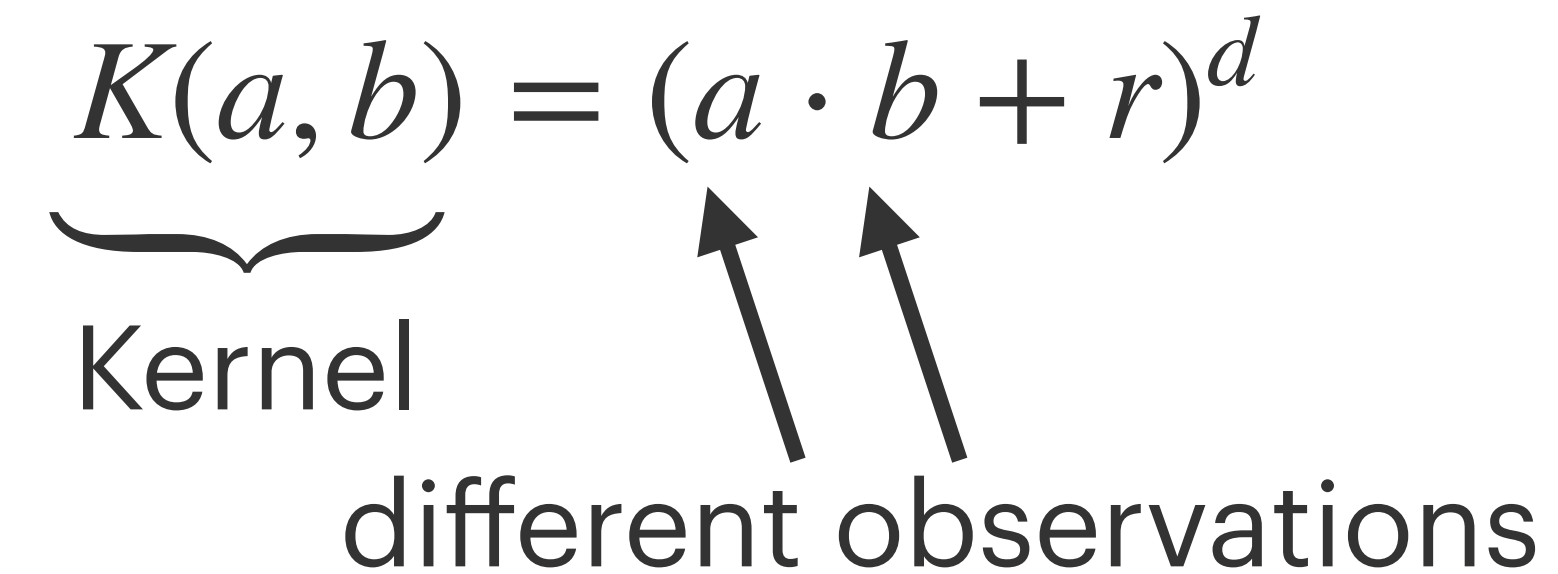


The Polynomial Kernel

The **Polynomial Kernel** in the previous sleep vs. happiness example

$$\underbrace{K(a, b)}_{\text{Kernel}} = (a \cdot b + r)^d$$

different observations



where r is the coefficients and d the degree
(determined by **cross validation**)