

The Radial Kernel (RBF)

The **Radial Kernel**

$$K(a, b) = e^{-\gamma(a - b)^2}$$

projects to infinite dimensional space
works similar to nearest neighbors classifier

we can use the Polynomial Kernel to get the intuition
behind how Radial Kernel works in infinite dimensions

$$K(a, b) = (a \cdot b)^d$$

$$ab + a^2b^2 = (a, a^2)(b, b^2)$$



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$$K(a, b) = (a \cdot b)^d$$
$$ab + a^2b^2 + a^3b^3 = (a, a^2, a^3)(b, b^2, b^3)$$

