

- Common kernel functions for SVM

- linear

$$k(\mathbf{x}_1, \mathbf{x}_2) = \mathbf{x}_1 \cdot \mathbf{x}_2$$

- polynomial

$$k(\mathbf{x}_1, \mathbf{x}_2) = (\gamma \mathbf{x}_1 \cdot \mathbf{x}_2 + c)^d$$

- Gaussian or radial basis

$$k(\mathbf{x}_1, \mathbf{x}_2) = \exp\left(-\gamma \|\mathbf{x}_1 - \mathbf{x}_2\|^2\right)$$