



$$\mathbf{K} = \mathbf{X}\mathbf{X}^\top \in \mathbb{R}^{n \times n}$$

\approx



$$\mathbf{C} \in \mathbb{R}^{n \times k}$$



$$\mathbf{W}^\dagger \in \mathbb{R}^{k \times k}$$



$$\mathbf{C}^\top$$

$$\tilde{\mathbf{K}} = \mathbf{C}\mathbf{W}^\dagger\mathbf{C}^\top$$

$$\Phi = \tilde{\mathbf{K}}^{-1/2}\mathbf{X}_k$$

with a linear kernel

$$\tilde{\mathbf{x}} = \Phi\mathbf{x}$$

Reduction