Noisy observations

$$\widehat{f}(x) = f(x) + \epsilon$$ ← Independent Gaussian noise

$$\epsilon \sim \mathcal{N}(0, s^2)$$

$$m(x) = 0$$

$$\widehat{K}(x_i - x_j) = K(x_i - x_j) + s^2 \mathbb{I}[x_i = x_j]$$