

- $\mathcal{N}(\mu, \sigma^2)$ – Gaussian distribution with mean μ and variance σ^2 :

$$f(x) = \frac{1}{\sqrt{2\pi\sigma^2}} e^{-\frac{(x-\mu)^2}{2\sigma^2}}, \quad -\infty < x < \infty$$

- $\mathcal{N}(\boldsymbol{\mu}, K)$ – multivariate Gaussian distribution with mean $\boldsymbol{\mu}$ and covariance matrix K , i.e., the joint pdf of the distribution is given by

$$f(\mathbf{x}) = \frac{1}{(\sqrt{2\pi})^n |K|^{1/2}} e^{-\frac{1}{2}(\mathbf{x}-\boldsymbol{\mu})^\top K^{-1}(\mathbf{x}-\boldsymbol{\mu})}, \quad \mathbf{x} \in \Re^n$$

where K is a symmetric positive definite matrix.