Multivariate normal

$$\mathcal{N}(x|\mu,\Sigma) = \frac{1}{\sqrt{|2\pi\Sigma|}}\exp\left[-\frac{1}{2}(x-\mu)^T\Sigma^{-1}(x-\mu)\right]$$

$$\mathbb{E}X = \mu \quad \mathrm{Cov}[X] = \Sigma$$