

Bivariate normal distribution

$$f(x) = \frac{1}{\sqrt{(2\pi)^n \det(\Sigma_x)}} \exp\left(-\frac{1}{2}(x-\mu)^T \Sigma_x^{-1}(x-\mu)\right)$$

$$\text{with } \mu = \begin{pmatrix} 0 \\ 0 \end{pmatrix}, \Sigma_x = \begin{pmatrix} 3 & 2 \\ 2 & 3 \end{pmatrix}$$

