



## Normal Differential Entropy

### 1 Why

What is the differential mutual information between two components of a multivariate normal.

### 2 Result

**Proposition 1.** *Let  $g \sim \mathcal{N}(\mu, \Sigma)$  Then the differential entropy of  $g$  is*

$$\frac{1}{2} \ln ((2\pi e)^d \mathbf{det} \Sigma)$$