⌖ Normal Differential Mutual Information

1 Why

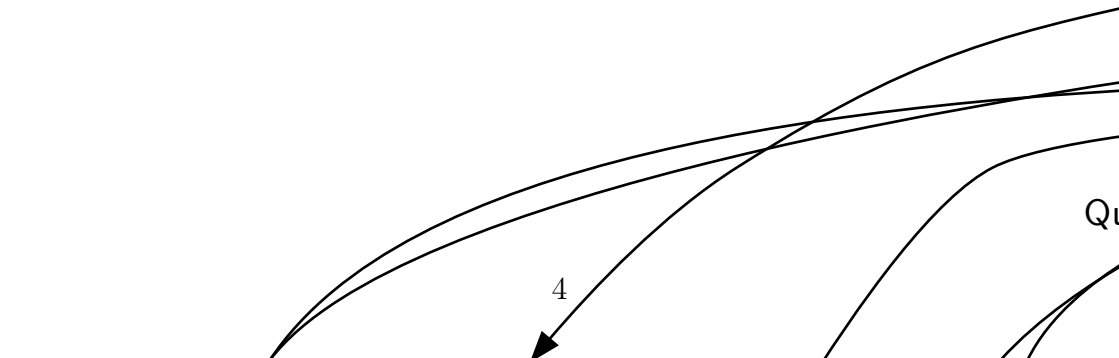
What is the differential mutual information between two components of a multivariate normal.

2 Result

Proposition 1. *Let $g \sim \mathcal{N}(\mu, \Sigma)$. Then the mutual information between component i and component j is*

$$-\frac{1}{2}\ln(1-\rho_{ij}^2)$$

where ρ_{ij} is the correlation between components i and j.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