Why

What is the correlation between components of a normal density.

Result

Prop. 1. *Let $g \sim \mathcal{N}(\mu, \Sigma)$. Then the correlation between the ith and jth component random variables is*

$$\frac{\Sigma_{ij}}{\sqrt{\Sigma_{ii}\Sigma_{jj}}}$$

Normal Correlation
Multivariate Normals
Correlation
Positive Definite Matrices
Symmetric Matrices
Standard Deviation
Multivariate Real Densities
Quadratic Forms
Matrix Trace
Real Matrix Inverses
Normal Densities
Covariance
Matrix Transpose
Probability Densities
Real Matrix-Matrix Products
Variance
Identity Matrices
Real Integrals
Real Matrix-Vector Products
Exponential Function
Outcome Variable Covariance
Expectation
Matrices
Vectors as Matrices
Nonnegative Integrals
Matrix Dimensionality
Real Square Roots
Random Variables
Real Matrices
Real Inner Product
Simple Integrals
Real Linear Combinations
Induced Probability Distributions
Probability Measures
Topological Signa- Algebra
Measurable Functions
Linear Functions
Vectors
Real Norms
Sparse Vectors
Sparse Norms
Outcome Variable Events
Measures
Topological Spaces
Sigma- Algebras
Metrics
Real Vectors
Plane Vector Sums and Differences
Plane Vectors
Plane Norms
Plane Inner Product
Event Probabilities
Extended Real Numbers
Real Series
Distance
Right Triangle Sides Relation
Natural Square Roots
Real Functions
Absolute Value
Plane Distance
Simple Functions
Square Functions
Real Exponents
Real Multiplicative Inverses
Probability Distributions
Interval Length
Real Functions
Squares
Real Fractions
Real Inverses
Interval
Real Powers
Real Values
Real Addition Inverses
Real Line
Sequences
Real Order
Integral Line
Lists
Permutations
Natural Multiplication Inverses
Natural Arithmetic
Real Sums
Subset Algebras
Cardinality
Natural Products
Natural Sums
Fibbs
Real Numbers
Rational Order
Inverse Elements
Integers
Graphs
Set Members
Uncertain Outcomes
Rational Numbers
Rings
Element Functions
Finite Sets
Direct Products
Integer Products
Natural Multiplicative Identity
Natural Additive Identity
Equivalent Sets
Natural Exponentiation
Natural Equations
Integer Sums
Arithmetic
Identity Elements
Integer Order
Function Inverses
Comparisons
Family Operations
Family Unions and Intersections
Natural Powers
Functions
Integer Products
Exponentiation
Poles
Function Images
Function Composites
Families
Natural Factorials
Natural Order
Equivalence Relations
Countable
Converse Relations
Natural Sums
Relations
Recursive Streams
Subset Systems
Set Products
Characteristic Functions
Finite Streams
Ordered Pairs
Set Powers
Ordered Triples
Natural Inductions
Natural Numbers
Unordered Set Dualities
Set Symmetric Differences
Antichains
Intersection of Empty Set
Inverse Sets
Set Duals
Set Unions and Intersections
Set Complements
Set Intersections
Set Unions
Set Differences
Set Unions
Plus Commutative
Unordered Pairs
Empty Set
Set Specifications
Set Equality
Set Includes
Standardized Arguments
Arguments
Deductions
Quantified Statements
Logical Statements
Statements
Materials
Sets
Names
Letters
Objects