mostly stub

TODO: whether to make this about random variables or about data?

Why

Definition

Let $f : \mathbf{R}^d \to \mathbf{R}$ be a density. The *correlation matrix* of f is the matrix whose i, jth entry is the correlation between components i and j of f.

Correlation Matrix

Correlation   Matrices

Standard Deviation

Covariance

Variance

Expectation

Random Variables

Measurable Functions   Probability Measures

Measures   Event Probabilities

Probability Events   Extended Real Numbers   Probability Distributions   Topological Sigma Algebra

Subset Algebras   Probability Outcomes   Real Limits   Intervals   Topological Spaces   Real Summation   Vectors

Cardinality   Set Operations   Probability   Real Sequences   Natural Summation   Metrics   Real Square Roots   N-Dimensional Space   Fields

Sequences   Common Sense   Family Operations   Distance   Real Numbers   Space   Groups

Direct Products   Algebra   Length Common Notions   Rational Numbers   Natural Square Roots

Function Composites   Families   Operations   Natural Sums   Integer Numbers   Square Numbers

Functions   Natural Products   Zero   Squares

Relations   Natural Numbers   Equation Solutions

Subset Systems   Cartesian Products   Set Intersections

Set Powers   Ordered Pairs

Unordered Triples   Pair Intersections

Pair Unions   Set Symmetric Differences

Set Unions   Set Complements

Unordered Pairs   Empty Set   Set Differences

Set Specification

Set Inclusion

Standardized Accounts

Definitions   Accounts

Quantified Statements   Deductions

Logical Statements

Statements

Sets   Identities

Names

Objects   Letters