Definition

The mutual information graph of a distribution over a product of a n sets is a weighted graph which is complete and whose edge weights are given by the mutual information between the marginals over pairs of components.

Mutual Information Graph

Mutual Information

Relative Entropy

Marginal Distributions

Similarity Functions

Metrics

Distance

Cross Entropy

Discrete Entropy

Joint Distributions

Absolute Value

Space Distance

Logarithm

Probability Distributions

Plane Distance

Exponential Function

Outcome Probabilities

Interval Length

Real Functions

Real Space

Intervals

Real Line

Real Plane

Integral Line

Real Order

Real Summation

Weighted Graphs

Geometry

Rational Order

Real Numbers

Natural Summation

Directed Graphs

Rational Numbers

Undirected Graphs

Lists

Integer Arithmetic

Set Numbers

Direct Products

Integer Products

Natural Multiplicative Identity

Natural Additive Identity

Finite Sets

Arithmetic

Identity Elements

Equivalent Sets

Family Operations

Family Unions and Intersections

Natural Powers

Integer Sums

Integer Order

Comparisons

Function Inverses

Families

Natural Products

Integer Numbers

Orders

Operations

Function Images

Function Composites

Natural Sums

Equivalence Relations

Natural Order

Converse Relations

Functions

Recursion Theorem

Relations

Peano Axioms

Ordered Pair Projections

Uncertain Outcomes

Natural Induction

Set Products

Natural Numbers

Generalized Set Dualities

Set Powers

Set Symmetric Differences

Partitions

Set Dualities

Intersection of Empty Set

Successor Sets

Unordered Triples

Set Unions and Intersections

Set Complements

Set Intersections

Pair Unions

Ordered Pairs

Set Differences

Set Unions

Pair Intersections

Empty Set

Unordered Pairs

Set Specification

Set Equality

Set Inclusion

Deductions

Quantified Statements

Logical Statements

Statements

Sets

Identities

Names

Letters

Objects