Why

How to select distribution graphs.[1]

Definition

Let (G, A) be a typed graph on $\{1, \ldots, n\}$. Let $S \subset \{1, \ldots, n\}$. Let $x^1, \ldots, x^n$ be a dataset in $A_S = \prod_{j \in S} A_j$ (see Function Graphs). The *observation likelihood* for this dataset is the observation distribution likelihood of the dataset $\prod_{i=1}^{n} p_S(x^i)$.

A *maximum likelihood distribution graph* is one that maximizes the observation likelihood. The maximum likelihood distribution graph with respect to a parametric distribution family is the member of the family that maximizes the observation likelihood.

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[1]Future editions will modify.

Maximum Likelihood Distribution Graphs

Distribution Graph Selection

Parameterized Distribution Graphs

Parameterized Distributions

Distribution Families

Probability Densities

Real Integrals

Nonnegative Integrals

Simple Integrals

Measurable Function

Measures

Sigma Algebras

Real Series

Extended Real Numbers

Real Limits

Distribution Graphs

Directed Graph Distributions

Hidden Memory Chains

Memory Chains

Conditional Distributions

Rooted Tree Distributions

Conditional Event Probabilities

Marginal Distribution

Rooted Trees

Function Graphs

Simple Functions

Absolute Value

Event Probabilities

Maximum Likelihood Distribution

Real Sequences

Joint Distribution

Trees

Directed Graphs

Real Function

Interval Length

Probability Distribution

Sequences

Undirected Paths

Intervals

Optimism

Lists

Undirected Graphs

Real Line

Set Numbers

Real Order

Real Summation

Rational Order

Real Numbers

Direct Products

Integral Line

Rational Numbers

Subset Algebras

Integer Arithmetic

Cardinality

Integer Products

Natural Additive Identity

Natural Multiplicative Identity

Identity Elements

Finite Sets

Equivalent Sets

Natural Summation

Integer Sums

Arithmetic

Comparisons

Family Operations

Function Inverses

Family Unions and Intersections

Integer Order

Orders

Operations

Function Images

Function Composites

Families

Integer Numbers

Natural Power

Natural Order

Equivalence Relations

Converse Relations

Functions

Natural Products

Relations

Natural Sums

Characteristic Function

Recursion Theorems

Set Products

Subset Systems

Ordered Pairs

Peano Axioms

Set Powers

Natural Induction

Uncertain Outcomes

Natural Numbers

Unordered Triples

Generalized Set Qualities

Set Symmetric Difference

Successor Sets

Set Qualities

Intersection of Empty Set

Partitions

Set Unions and Intersections

Set Complements

Pair Unions

Set Intersection

Set Differences

Set Union

Pair Intersections

Empty Set

Unordered Pairs

Geometry

Set Specification

Set Inclusion

Standardized Accounts

Accounts

Deductions

Quantified Statements

Logical Statements

Statements

Sets

Identities

Names

Letters

Objects