Why

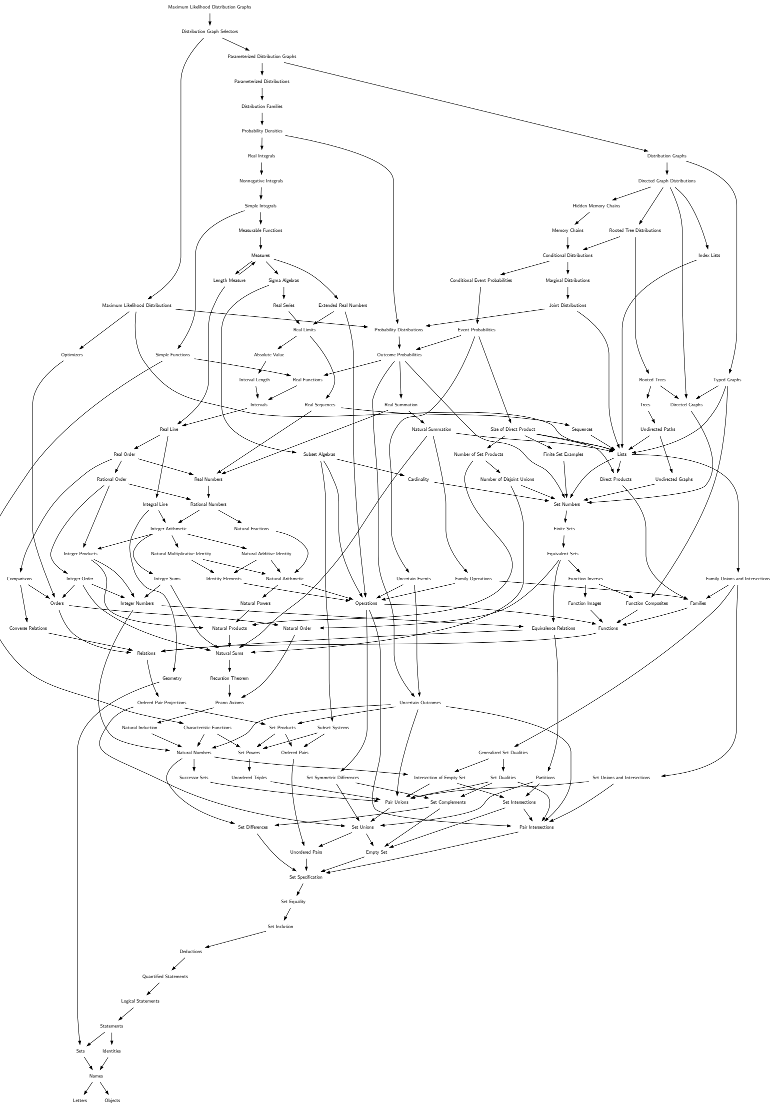
How to select distribution graphs.[1]

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.

[1] Future editions will modify.


Maximum Likelihood Distribution Graphs
Distribution Graph Selectors
Parameterized Distribution Graphs
Parameterized Distributions
Distribution Families
Probability Densities
Real Integrals
Nonnegative Integrals
Simple Integrals
Measurable Functions
Measures
Length Measure
Sigma Algebras
Extended Real Numbers
Real Series
Maximum Likelihood Distributions
Real Limits
Optimizers
Simple Functions
Absolute Value
Interval Length
Real Functions
Intervals
Real Sequences
Real Line
Real Order
Rational Order
Real Numbers
Rational Numbers
Integral Line
Integer Arithmetic
Natural Fractions
Integer Products
Natural Multiplicative Identity
Natural Additive Identity
Comparisons
Integer Order
Integer Sums
Identity Elements
Natural Arithmetic
Orders
Integer Numbers
Natural Powers
Converse Relations
Natural Products
Natural Order
Relations
Natural Sums
Geometry
Recursion Theorem
Ordered Pair Projections
Peano Axioms
Natural Induction
Characteristic Functions
Set Products
Subset Systems
Natural Numbers
Set Powers
Ordered Pairs
Successor Sets
Unordered Triples
Set Symmetric Differences
Set Differences
Unordered Pairs
Set Specification
Set Equality
Set Inclusion
Deductions
Quantified Statements
Logical Statements
Statements
Sets
Identities
Names
Letters
Objects
Distribution Graphs
Directed Graph Distributions
Hidden Memory Chains
Memory Chains
Rooted Tree Distributions
Conditional Distributions
Index Lists
Conditional Event Probabilities
Marginal Distributions
Joint Distributions
Probability Distributions
Event Probabilities
Outcome Probabilities
Rooted Trees
Typed Graphs
Trees
Directed Graphs
Real Summation
Natural Summation
Size of Direct Product
Sequences
Undirected Paths
Subset Algebras
Number of Set Products
Finite Set Examples
Lists
Cardinality
Number of Disjoint Unions
Direct Products
Undirected Graphs
Set Numbers
Finite Sets
Equivalent Sets
Uncertain Events
Family Operations
Function Inverses
Family Unions and Intersections
Operations
Function Images
Function Composites
Families
Equivalence Relations
Functions
Uncertain Outcomes
Generalized Set Dualities
Intersection of Empty Set
Set Dualities
Partitions
Set Unions and Intersections
Pair Unions
Set Complements
Set Intersections
Set Unions
Pair Intersections
Empty Set