Why

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Definition

Let G be a directed graph on $\{1, \ldots, n\}$. A *parametric distribution graph family* (or *parametric distribution network familiy, parameteric conditional distribution network family*) is a family of conditional distribution networks $\{G, \{g_i^{(\theta)}\}_{i=1}^n\}_{\theta \in \Theta}$. We call the index set Θ the *parameter set*. G does not depend on the parameters.

In the case that $\mathrm{pa}_i = \varnothing$ in G, $\{g_i^{(\theta)}\}_\theta$ is a parametric distribution family on A_i and in the case that $\mathrm{pa}_i \neq \varnothing$, $\{g_i^{(\theta)}\}_\theta$ is a parametric conditional distribution family on A_i from $\prod_{j \in \mathrm{pa}_i} A_j$ (for both these terms, see Parameterized Distributions).

A parametric distribution network family is *functionally parameterizable* if each of the conditionals is functionally parameterizable (again, see Parameterized Distributions).

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[1]Future editions will include.

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