



Why

How to select distribution graphs.¹

Definition

Let (G, A) be a typed graph on $\{1, \dots, n\}$. Let $S \subset \{1, \dots, n\}$. Let x^1, \dots, 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.

¹Future editions will modify.

