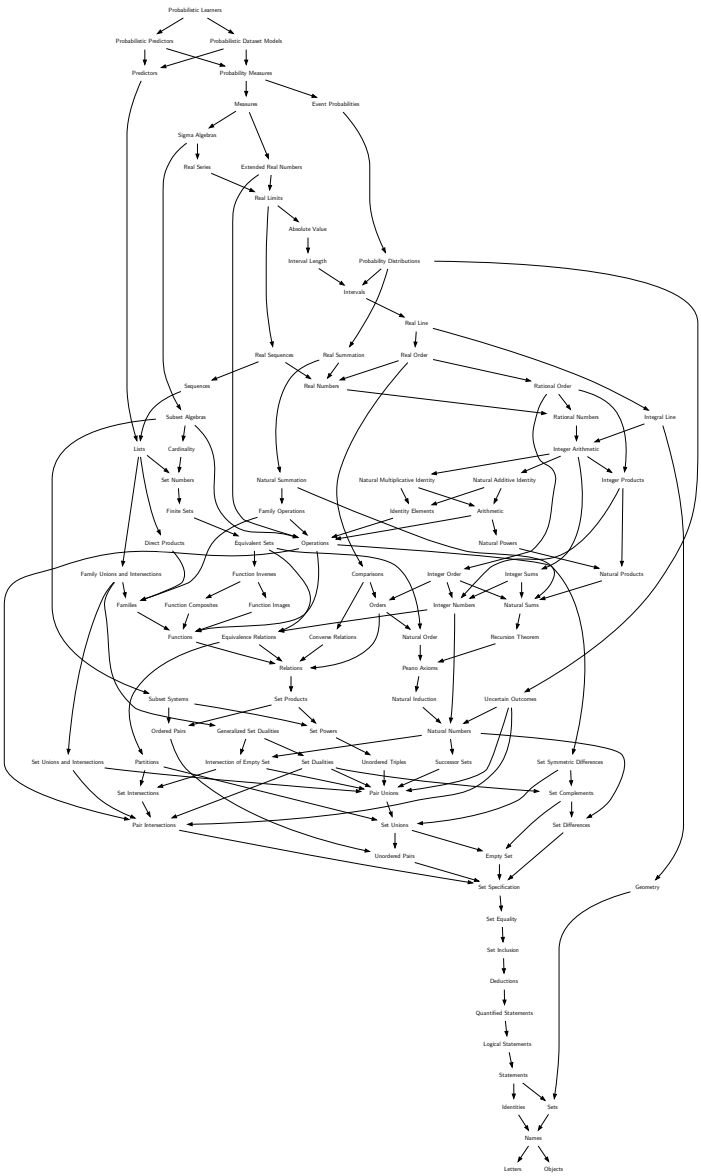
Why

In general, a dataset may be both incomplete and inconsistent.

Why

Let $(Z, \mathcal{Z})$ be a measurable space. Let $\mathcal{M}(Z, \mathcal{Z})$ be the set of measures over $(Z, \mathcal{Z})$. A *probabilistic inductor* for a dataset in Z^n is a function mapping Z^n to $\mathcal{M}(Z, \mathcal{Z})$.

Suppose $(Z, \mathcal{Z}) = (X \times Y, \mathcal{X} \times \mathcal{Y})$ for measurable spaces $(X, \mathcal{X})$ and $(Y, \mathcal{Y})$. Then a probabilistic inductor yields a probabilistic functional inductor. The conditional measure on Y given an observation $x \in X$ is exactly a family of measures indexed by X.


Probabilistic Learners
Probabilistic Predictors
Probabilistic Dataset Models
Predictors
Probability Measures
Measures
Event Probabilities
Sigma Algebras
Real Series
Extended Real Numbers
Real Limits
Absolute Value
Interval Length
Probability Distributions
Intervals
Real Line
Real Sequences
Real Summation
Real Order
Sequences
Real Numbers
Rational Order
Rational Numbers
Integral Line
Subset Algebras
Integer Arithmetic
Lists
Cardinality
Set Numbers
Natural Summation
Natural Multiplicative Identity
Natural Additive Identity
Integer Products
Finite Sets
Family Operations
Identity Elements
Arithmetic
Direct Products
Equivalence Sets
Operations
Natural Powers
Family Unions and Intersections
Function Inverses
Comparisons
Integer Order
Integer Sums
Natural Products
Families
Function Composites
Function Images
Orders
Integer Numbers
Natural Sums
Functions
Equivalence Relations
Converse Relations
Natural Order
Recursion Theorem
Relations
Peano Axioms
Subset Systems
Set Products
Natural Induction
Uncertain Outcomes
Ordered Pairs
Generalized Set Dualities
Set Powers
Natural Numbers
Set Unions and Intersections
Partitions
Intersection of Empty Set
Set Dualities
Unordered Triples
Successor Sets
Set Symmetric Differences
Set Intersections
Pair Unions
Set Complements
Pair Intersections
Set Unions
Set Differences
Unordered Pairs
Empty Set
Set Specification
Geometry
Set Equality
Set Inclusion
Deductions
Quantified Statements
Logical Statements
Statements
Identities
Sets
Names
Letters
Objects