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List Of Symbols

$\mathfrak{D}$	Spatio-temporal data stream
O	Orientation
D	Direction
$\mathcal{STDL}$	Spatio-temporal description logic
B-$\mathcal{STDL}$	Bayesian $\mathcal{STDL}$
$\mathfrak{L}$	Logical Bayesian Network
P_r	Probability of spatial relation of each episode.
ST	Spatio-temporal relation
S	Spatial relation
T	Tempoaral Structure
C_D	Direction relations

C_{D_1}	Direction relations for a particular scenario
C_O	*Orientation relations*
C_{O_1}	Orientation relations for a particular scenario
$\mathfrak{R}$	Set of intervals
E	Episode
S1	Scenario
$\mathfrak{SC}$	Spatial concept
$\mathfrak{TC}$	Temporal concept
$\mathfrak{STC}$	Spatio-temporal concept
R_D	Role for Direction
R_O	Role for Orientation
$\mathfrak{D}$	Domain of objects/individuals
$\mathfrak{C}$	Constant
$\mathcal{A}$	Atomic concepts
$\mathfrak{R}$	Role

$\mathfrak{I}$	Interpretation function
$\mathfrak{N}$	Non-logical symbols
LN	Logical Network
V	Vertices
$\mathfrak{E}$	Edges
LN ^{1}	Logical Network for a particular scenario
V 1	Vertices of Logical network for a particular scenario
$\mathfrak{E}_1$	Edges of Logical network for a particular scenario
$\mathfrak{T}$	True concept
$\mathfrak{F}$	Pseudo concept
α	Concept probability
o	No. of occurrances of a true concept in a scenario
$\mathbb{P}_{\mathbb{AB}}$	Probabilistic Abox
$\mathbb{P}_{\mathbb{TB}}$	Probabilistic Tbox
$\mathbb{P}_{\mathbb{A}}$	Probabilistic Axioms

η	Probability of Probabilistic Axioms
$\mathbb{P}$	Probabilistic Patterns
$\mathbb{P}_{\mathbb{F}}$	Probabilistic Funadamental Patterns
Ψ	Probability of Probabilistic Fundamental Pattern
$\mathbb{P}_{\mathbb{B}}$	Probabilistic Basic Patterns
ρ	Probability of Probabilistic Basic Pattern
$\mathbb{P}_{\mathbb{NP}}$	Probabilistic Neighboring Patterns
φ	Probability of Probabilistic Neighboring Pattern
$\mathfrak{M}$	Motion Pattern
Υ	Probability of Composite pattern
$\mathfrak{I}$	Annotated Interpretation
$\mathfrak{P}$	Probabilistic Interpretation