

AutoML Lecture: Notation Cheat Sheet (extended for BO)

Symbol	Meaning
\mathcal{G}	Gaussian process
F	Family of Target Functions
t	BO loop counter
T	BO loop counter max, the counter runs from 1 to this value
\mathcal{X}	BO parameter space
x	BO parameter
x_t^+	current incumbent at iteration t
y	BO loop observation
\mathcal{Y}	BO loop observation space
x_t	BO loop next sample (selected for evaluation at each iteration of the BO loop)
y_t	BO loop next observation
u	Acquisition Function, no args
ϕ	Standard Normal PDF
Φ	Standard Normal CDF
μ	Mean
σ	Standard Deviation
σ^2	Variance
ν	Noise
\mathbb{R}	Real numbers set
\mathcal{I}	Instances
\mathbb{E}	Expected value
κ	kernel
c	Constraint function
\mathcal{N}	Normal distribution