Stage #1: Problem Definition

Problem name: HPO_XGboost

Parameter 1

Name: max_depth
Type: integer
Range: [1,10]

Parameter 2

Name: eta
Type: numerical
Range: [-10,10]

Parameter 3

Name: reg_lambda
Type: numerical
Range: [-10,10]

Workload

Training data:
Boston house prices
Type: Regression

Budget

Type: The number of function evaluations
Value: 100

Objective

Type: Accuracy
Number: 1

Stage #2:Optimizer Selection

Space Refiner [ ]
Sampler [ ]
Pretrain [ ]
Model [ ]
ACF [ ]

Plugin pool

Space prune
Meta-learning based sampling
EA based sampling
Multi-task ACF
Ensemble GP
Gradient based sampling
Ensemble ACF
Multi-task GP
Ensemble ACF
...

TOS

Stage #4: Execution and Visualization

Parameters
Budget
Objective Function

Optimizer

Space Refiner [•] [•]
Sampler [•] [•]
Pretrain [•] [•]
Model [•] [•]
ACF [•] [•]

Stage #3:Metadata Selection

Space Refiner [•] [ ]
Sampler [•] [ ]
Pretrain [•] [ ]
Model [•] [ ]
ACF [•] [ ]

Data base

Ackley data
HPO data
OpenML data
Sphere data
...