approximate_bayesian_computation

Parameters

cm_name: abc_10
dataframe_in: data_missing_10
description: Approximate Bayesian Computation for Time Series
diff_func_name: manhattan_metrics
diff_func_parameters: {}
model_method: approximate_bayesian_computation
name: approximate_bayesian_computation
parameters:
  algorithm: pydream
  decision_variables:
    keys:
    - max_keys
  decision_variables_names:
  - graph_structure
  epsilons:
  - 1
  ground_truth_topology:
    keys:
    - max_keys
  initial_points: 100
  n_chains: 3
  n_draws: 15000
  n_iterations: 100
  nfe: 15000
  num_pool: 1
  population_size: 100
  seed: 1
report_parameters: {}
running_time: 205723.0347867012
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	16767.361382	14.486283
1	16767.361382	14.994302
2	16767.361382	15.421741
3	0.000000	16.817631
4	0.000000	17.818230
...	...	...
14254	0.000000	16.387454
14255	0.000000	17.113731
14256	0.000000	15.609160
14257	0.000000	15.813691
14258	0.000000	16.352044

[14259 rows x 2 columns]

with the most optimal solution:

	graph_structure	Distance	round
0	15988.217867	13.484462	15988.0

with an acceptance percentage of 15.16687790452049%

approximate_bayesian_computation

Parameters

cm_name: abc_20
dataframe_in: data_missing_20
description: Approximate Bayesian Computation for Time Series
diff_func_name: manhattan_metrics
diff_func_parameters: {}
model_method: approximate_bayesian_computation
name: approximate_bayesian_computation
parameters:
  algorithm: pydream
  decision_variables:
    keys:
    - max_keys
  decision_variables_names:
  - graph_structure
  epsilons:
  - 1
  ground_truth_topology:
    keys:
    - max_keys
  initial_points: 100
  n_chains: 3
  n_draws: 15000
  n_iterations: 100
  nfe: 15000
  num_pool: 1
  population_size: 100
  seed: 1
report_parameters: {}
running_time: 198357.90440821648
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	16767.361382	15.560987
1	0.000000	18.252064
2	0.000000	18.135573
3	0.000000	17.850686
4	0.000000	19.176587
...	...	...
17415	0.000007	19.707469
17416	0.000007	17.675977
17417	0.000007	18.379716
17418	0.000007	17.751541
17419	0.000007	19.725262

[17420 rows x 2 columns]

with the most optimal solution:

	graph_structure	Distance	round
0	15988.217867	13.912612	15988.0

with an acceptance percentage of 25.81326573722011%

Summary

Model Name	Model Method	Score	Difference Function	Dataframe	Duration
abc_20	approximate_bayesian_computation	0.97	manhattan_metrics	data_missing_20	198357.904 sec
abc_10	approximate_bayesian_computation	0.97	manhattan_metrics	data_missing_10	205723.035 sec