approximate_bayesian_computation

Parameters

cm_name: abc_60
dataframe_in: data_missing_60
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: 201479.28778481483
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	16767.361382	30.390699
1	0.000000	28.395445
2	0.000000	28.947705
3	0.000000	30.217538
4	0.000000	31.942916
...	...	...
6229	0.000003	31.806532
6230	0.000003	32.107886
6231	0.000003	31.844848
6232	0.000003	33.255214
6233	0.000003	27.142936

[6234 rows x 2 columns]

with the most optimal solution:

	graph_structure	Distance	round
0	0.0	23.668014	0.0

with an acceptance percentage of 9.038756587285706%

approximate_bayesian_computation

Parameters

cm_name: abc_50
dataframe_in: data_missing_50
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: 208175.5034081936
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	16767.361382	24.217342
1	0.000000	23.862108
2	0.000000	24.242936
3	0.000000	25.090713
4	0.000000	26.755859
...	...	...
10307	0.000005	24.723199
10308	0.000005	25.277145
10309	0.000005	23.998416
10310	0.000005	23.409113
10311	0.000005	23.972987

[10312 rows x 2 columns]

with the most optimal solution:

	graph_structure	Distance	round
0	15988.217867	18.193655	15988.0

with an acceptance percentage of 18.048606941942943%

Summary

Model Name	Model Method	Score	Difference Function	Dataframe	Duration
abc_60	approximate_bayesian_computation	0.96	manhattan_metrics	data_missing_60	201479.288 sec
abc_50	approximate_bayesian_computation	0.97	manhattan_metrics	data_missing_50	208175.503 sec