approximate_bayesian_computation

Parameters

cm_name: abc_40
dataframe_in: data_missing_40
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: 201123.57654047012
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	16767.361382	17.942767
1	0.000000	18.281662
2	0.000000	20.093005
3	0.000000	18.721126
4	0.000000	19.290251
...	...	...
25006	0.000414	18.577119
25007	0.000414	18.568762
25008	0.000415	19.224438
25009	0.000415	19.003903
25010	0.000416	19.310503

[25011 rows x 2 columns]

with the most optimal solution:

	graph_structure	Distance	round
0	15988.217867	17.338394	15988.0

with an acceptance percentage of 37.81157583438952%

approximate_bayesian_computation

Parameters

cm_name: abc_30
dataframe_in: data_missing_30
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: 191170.73300004005
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	16767.361382	16.903603
1	16767.361382	16.973369
2	16767.361382	17.030786
3	0.000000	18.242203
4	0.000000	18.992368
...	...	...
27378	0.000282	18.766823
27379	0.000283	18.639230
27380	0.000283	19.029072
27381	0.000283	19.058217
27382	0.000283	19.018439

[27383 rows x 2 columns]

with the most optimal solution:

	graph_structure	Distance	round
0	15988.217867	16.530697	15988.0

with an acceptance percentage of 19.669579525493074%

Summary

Model Name	Model Method	Score	Difference Function	Dataframe	Duration
abc_40	approximate_bayesian_computation	0.97	manhattan_metrics	data_missing_40	201123.577 sec
abc_30	approximate_bayesian_computation	0.97	manhattan_metrics	data_missing_30	191170.733 sec