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: 321607.9655034542

type: calibrationmodel

version: 1.0.0

Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	1.676736e+04	20.149904
1	0.000000e+00	22.125304
2	0.000000e+00	21.930322
3	0.000000e+00	21.611766
4	0.000000e+00	23.338684
...	...	...
5560	6.121784e-07	20.597243
5561	6.135201e-07	20.921446
5562	6.148617e-07	24.091192
5563	6.148617e-07	23.213962
5564	6.162034e-07	20.931940

[5565 rows x 2 columns]

with the most optimal solution:

	graph_structure	Distance	round
0	15988.217867	15.415403	15988.0

with an acceptance percentage of 8.293865208013697%

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: 201010.991938591
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	1.676736e+04	17.383342
1	0.000000e+00	19.834729
2	0.000000e+00	19.689534
3	0.000000e+00	19.395423
4	0.000000e+00	20.887728
...	...	...
17324	4.982781e-07	19.940565
17325	4.981291e-07	21.006287
17326	4.979801e-07	21.417083
17327	4.978311e-07	19.151590
17328	4.976821e-07	19.706775

[17329 rows x 2 columns]

with the most optimal solution:

	graph_structure	Distance	round
0	15988.217867	13.673134	15988.0

with an acceptance percentage of 27.96344473350677%

Summary

Model Name	Model Method	Score	Difference Function	Dataframe	Duration
abc_40	approximate_bayesian_computation	0.97	manhattan_metrics	data_missing_40	321607.966 sec
abc_30	approximate_bayesian_computation	0.97	manhattan_metrics	data_missing_30	201010.992 sec