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: 191329.83560609818
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	16767.361382	14.072480
1	16767.361382	14.074526
2	16767.361382	14.332750
3	0.000000	15.565735
4	0.000000	16.378853
...	...	...
25195	0.000029	16.166099
25196	0.000029	16.150560
25197	0.000029	16.013333
25198	0.000029	16.464292
25199	0.000029	15.428929

[25200 rows x 2 columns]

with the most optimal solution:

	graph_structure	Distance	round
0	15988.217867	13.669093	15988.0

with an acceptance percentage of 21.684121584061547%

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: 192570.82273840904
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	16767.361382	14.145105
1	16767.361382	14.260440
2	16767.361382	14.533235
3	0.000000	15.742475
4	0.000000	16.568079
...	...	...
25688	0.000026	16.000699
25689	0.000026	15.982464
25690	0.000026	15.739962
25691	0.000026	15.577213
25692	0.000026	15.078009

[25693 rows x 2 columns]

with the most optimal solution:

	graph_structure	Distance	round
0	15988.217867	14.134392	15988.0

with an acceptance percentage of 22.028772819247102%

Summary

Model Name	Model Method	Score	Difference Function	Dataframe	Duration
abc_40	approximate_bayesian_computation	0.97	manhattan_metrics	data_missing_40	192570.823 sec
abc_30	approximate_bayesian_computation	0.97	manhattan_metrics	data_missing_30	191329.836 sec