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: 16
report_parameters: {}
running_time: 184914.0918483734
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	22546.691528	44.834870
1	33368.040374	44.793640
2	39999.000000	34.826945
3	39999.000000	34.406724
4	39999.000000	34.571177
...	...	...
13539	34589.479087	13.987121
13540	34589.479087	14.393394
13541	34589.479087	14.320498
13542	34589.479087	16.089104
13543	34589.479087	15.716503

[13544 rows x 2 columns]

with the most optimal solution:

	graph_structure	Distance	round
0	34589.479087	13.35528	34589.0

with an acceptance percentage of 0.013341338136215063%

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: 16
report_parameters: {}
running_time: 160476.13403964043
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	22546.691528	48.644961
1	39999.000000	41.926765
2	39999.000000	38.341793
3	39999.000000	37.548397
4	39999.000000	38.559939
...	...	...
4727	39999.000000	38.732041
4728	39999.000000	38.833511
4729	39999.000000	39.266558
4730	39999.000000	38.911965
4731	39999.000000	38.406302

[4732 rows x 2 columns]

with the most optimal solution:

	graph_structure	Distance	round
0	39999.0	34.040221	39999.0

with an acceptance percentage of 0.006670669068107531 5%

Summary

Model Name	Model Method	Score	Difference Function	Dataframe	Duration
abc_40	approximate_bayesian_computation	0.94	manhattan_metrics	data_missing_40	160476.134 sec
abc_30	approximate_bayesian_computation	0.98	manhattan_metrics	data_missing_30	184914.092 sec