approximate_bayesian_computation

Parameters

cm_name: abc_90_s6
dataframe_in: data_missing_90
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: 296547.4798130989
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	22546.691528	169.992363
1	22546.691528	148.368833
2	22546.691528	137.592393
3	22546.691528	131.026633
4	22546.691528	126.361282
5	22546.691528	108.439991
6	22546.691528	106.985781
7	22546.691528	108.958870
8	22546.691528	100.939448
9	22546.691528	101.393142
10	22546.691528	99.998392
11	12946.781395	187.577050
12	12946.781395	185.963726

13 23768.130241 185.400299
14 34589.479087 86.340189
15 34589.479087 80.304307
16 34589.479087 74.084078
17 34589.479087 75.940209
18 34589.479087 76.195048
19 34589.479087 76.996509
20 34589.479087 76.698715
21 34589.479087 76.822077
22 34589.479087 76.392955
23 34589.479087 77.262633
24 34589.479087 76.222223
25 34589.479087 76.153635
26 34589.479087 76.420521
27 34589.479087 73.782901
28 34589.479087 73.710542
29 34589.479087 72.519514
30 34589.479087 69.194124
31 34589.479087 68.324396
32 34589.479087 70.628729
33 34589.479087 71.263440
34 34589.479087 68.057726
35 34589.479087 72.069322
36 34589.479087 68.673735
37 23768.130241 183.584878
38 34589.479087 90.744949
39 34589.479087 84.523582
40 34589.479087 84.463034
41 34589.479087 84.694851
42 34589.479087 83.192347
43 34589.479087 77.150214
44 34589.479087 73.680148
45 34589.479087 73.475277
46 34589.479087 73.909794
47 34589.479087 73.045086
48 34589.479087 67.878631
49 34589.479087 67.606169
50 34589.479087 74.562340
51 34589.479087 73.413201
52 34589.479087 70.489645
53 34589.479087 73.019584
54 34589.479087 73.273029
55 34589.479087 72.574982
56 34589.479087 73.505126
57 34589.479087 73.728137
58 34589.479087 73.460234
with the most optimal solution:
graph_structure Distance round
0 34589.479087 67.606169 34589.0
with an acceptance percentage of 0.008894225424143375%

approximate_bayesian_computation

Parameters

cm_name: abc_90_s1
dataframe_in: data_missing_90
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: 11
report_parameters: {}
running_time: 182801.0955040455
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	0.000000e+00	100.366464
1	0.000000e+00	97.588532
2	0.000000e+00	95.148980
3	0.000000e+00	89.660731
4	0.000000e+00	88.008846
5	1.749455e-12	85.762149
6	4.735863e-11	82.866440
7	9.406498e-11	81.576612
8	9.873512e-11	79.577923
9	1.425208e-10	80.408210
10	1.425208e-10	76.036632
11	0.000000e+00	106.005540
12	0.000000e+00	106.727978

13 0.000000e+00 99.425398
14 0.000000e+00 97.169945
15 0.000000e+00 93.430919
16 1.749455e-12 91.773757
17 5.782209e-13 93.244079
18 0.000000e+00 92.857545
19 1.749455e-12 90.048429
20 3.498909e-12 90.557037
21 3.498909e-12 88.584824
22 1.108974e-11 90.936519
23 1.868057e-11 88.691039
24 2.627141e-11 88.835075
25 0.000000e+00 89.583192
26 0.000000e+00 87.286114
27 4.560917e-11 82.285078
28 8.939484e-11 81.505495
29 1.893002e-10 84.077358
30 1.910496e-10 81.713832
31 1.927991e-10 78.359089
32 0.000000e+00 90.469509
33 1.749455e-12 93.813997
34 6.419598e-12 92.251064
35 6.419598e-12 91.389512
36 1.108974e-11 87.589686
37 1.283920e-11 90.769824
38 2.043003e-11 84.740581
39 2.043003e-11 81.744979
40 1.108725e-10 81.204476
41 2.013149e-10 81.483450
42 2.030644e-10 80.589960
43 2.048138e-10 79.844538
44 2.065633e-10 85.181530
45 2.083127e-10 87.834999
46 2.100622e-10 84.197813
with the most optimal solution:
graph_structure Distance round
0 1.425208e-10 76.036632 0.0
with an acceptance percentage of 0.06893024703711116%

Summary

Model Name	Model Method	Score	Difference Function	Dataframe	Duration
abc_90_s6	approximate_bayesian_computation	0.98	manhattan_metrics	data_missing_90	296547.480 sec
abc_90_s1	approximate_bayesian_computation	0.96	manhattan_metrics	data_missing_90	182801.096 sec