# approximate\_bayesian\_computation

```
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: 21
report_parameters: {}
running_time: 186640.4085664749
type: calibrationmodel
version: 1.0.0
```

#### Results

```
Summary CalibrationModel with solutions:
    graph structure Distance
0
      2782.768614 16.028560
1
      2782.768614 15.870171
2
        0.000000 15.666027
3
        0.000000 16.012789
4
        0.000000 15.447276
12593
          0.000000 15.377342
12594
          0.000000 16.472212
12595
          0.000000 15.887982
12596
          0.000000 15.640988
12597
          0.000000 15.207416
```

with the most optimal solution:
graph\_structure Distance round
0 0.0 14.524076 0.0
with an acceptance percentage of 0.008894225424143375%

## approximate\_bayesian\_computation

```
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: 21
report_parameters: {}
running_time: 187122.17622470856
type: calibrationmodel
version: 1.0.0
```

#### Results

```
Summary CalibrationModel with solutions:
    graph structure Distance
0
      2782.768614 16.128065
1
      2782.768614 16.046230
2
        0.000000 15.876880
3
        0.000000 16.156306
        0.000000 15.644546
4
21907
          0.000000 16.189280
21908
          0.000000 16.721714
21909
          0.000000 16.213194
21910
          0.000000 16.082167
```

0.000000 15.912799

21911

with the most optimal solution:
graph\_structure Distance round
0 0.0 14.656478 0.0
with an acceptance percentage of 0.008894225424143375%

### Summary

Model Name	Model Method	Score	Difference Function	Dataframe	Duration
abc_40	approximate_bayesian_computation	0.96	manhattan_metrics	data_missing_40	187122.176 sec
abc_30	approximate_bayesian_computation	0.96	manhattan_metrics	data_missing_30	186640.409 sec