# approximate_bayesian_computation

## Parameters

cm_name: abc_60
dataframe_in: data_missing_60
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: 161325.5445086956
type: calibrationmodel
version: 1.0.0

## Results

Summary CalibrationModel with solutions:

| | graph_structure | Distance |
|---|---|---|
| 0 | 22546.691528 | 66.348030 |
| 1 | 39999.000000 | 58.618663 |
| 2 | 39999.000000 | 52.975256 |
| 3 | 39999.000000 | 52.176623 |
| 4 | 39999.000000 | 54.046587 |
| ... | ... | ... |
| 1608 | 39999.000000 | 49.862339 |
| 1609 | 39999.000000 | 49.986892 |
| 1610 | 39999.000000 | 48.893474 |
| 1611 | 39999.000000 | 48.569830 |
| 1612 | 39999.000000 | 48.647137 |

[1613 rows x 2 columns]

with the most optimal solution:

| | graph_structure | Distance | round |
|---|---|---|---|
| 0 | 39999.0 | 46.318802 | 39999.0 |

with an acceptance percentage of 0.006670669068107531 5%

# approximate_bayesian_computation

## Parameters

cm_name: abc_50
dataframe_in: data_missing_50
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: 296133.57345342636
type: calibrationmodel
version: 1.0.0

## Results

Summary CalibrationModel with solutions:

| | graph_structure | Distance |
|---|---|---|
| 0 | 22546.691528 | 55.281419 |
| 1 | 22546.691528 | 53.687656 |
| 2 | 22546.691528 | 48.767243 |
| 3 | 22546.691528 | 48.351470 |
| 4 | 22546.691528 | 48.124800 |
| ... | ... | ... |
| 4149 | 34589.479087 | 19.808165 |
| 4150 | 34589.479087 | 20.146624 |
| 4151 | 34589.479087 | 19.377587 |
| 4152 | 34589.479087 | 21.066358 |
| 4153 | 34589.479087 | 21.829633 |

[4154 rows x 2 columns]

with the most optimal solution:

| | graph_structure | Distance | round |
|---|---|---|---|
| 0 | 34589.479087 | 15.81137 | 34589.0 |

with an acceptance percentage of 0.008894225424143375%

# Summary

| Model Name | Model Method | Score | Difference Function | Dataframe | Duration |
|---|---|---|---|---|---|
| abc_60 | approximate_bayesian_computation | 0.94 | manhattan_metrics | data_missing_60 | 161325.545 sec |
| abc_50 | approximate_bayesian_computation | 0.98 | manhattan_metrics | data_missing_50 | 296133.573 sec |