# 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: 169779.27839040756
type: calibrationmodel
version: 1.0.0

## Results

Summary CalibrationModel with solutions:

| | graph_structure | Distance |
|---|---|---|
| 0 | 22546.691528 | 37.873384 |
| 1 | 33368.040374 | 32.707257 |
| 2 | 39999.000000 | 27.195877 |
| 3 | 39999.000000 | 27.069520 |
| 4 | 39999.000000 | 27.242953 |
| ... | ... | ... |
| 23390 | 34589.479087 | 14.497307 |
| 23391 | 34589.479087 | 14.321216 |
| 23392 | 34589.479087 | 14.529375 |
| 23393 | 34589.479087 | 14.171700 |
| 23394 | 34589.479087 | 14.194515 |

[23395 rows x 2 columns]

with the most optimal solution:

| | graph_structure | Distance | round |
|---|---|---|---|
| 0 | 34589.479087 | 13.562526 | 34589.0 |

with an acceptance percentage of 0.013341338136215063%

# 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: 280921.5408337116
type: calibrationmodel
version: 1.0.0

## Results

Summary CalibrationModel with solutions:

| | graph_structure | Distance |
|---|---|---|
| 0 | 22546.691528 | 37.365739 |
| 1 | 33368.040374 | 32.746853 |
| 2 | 39999.000000 | 27.283507 |
| 3 | 39999.000000 | 27.010610 |
| 4 | 39999.000000 | 27.115646 |
| ... | ... | ... |
| 9570 | 34589.479087 | 13.777894 |
| 9571 | 34589.479087 | 13.973452 |
| 9572 | 34589.479087 | 14.942157 |
| 9573 | 34589.479087 | 13.886362 |
| 9574 | 34589.479087 | 14.130394 |

[9575 rows x 2 columns]

with the most optimal solution:

| | graph_structure | Distance | round |
|---|---|---|---|
| 0 | 34589.479087 | 13.389443 | 34589.0 |

with an acceptance percentage of 0.013341338136215063%

# Summary

| Model Name | Model Method | Score | Difference Function | Dataframe | Duration |
|---|---|---|---|---|---|
| abc_40 | approximate_bayesian_computation | 0.98 | manhattan_metrics | data_missing_40 | 169779.278 sec |
| abc_30 | approximate_bayesian_computation | 0.98 | manhattan_metrics | data_missing_30 | 280921.541 sec |