# approximate_bayesian_computation

## Parameters

cm_name: abc_10
dataframe_in: data_missing_10
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: 166783.423132658
type: calibrationmodel
version: 1.0.0

## Results

Summary CalibrationModel with solutions:

| | graph_structure | Distance |
|---|---|---|
| 0 | 22546.691528 | 38.928137 |
| 1 | 33368.040374 | 33.166649 |
| 2 | 39999.000000 | 27.631719 |
| 3 | 39999.000000 | 27.311518 |
| 4 | 39999.000000 | 27.408213 |
| ... | ... | ... |
| 16439 | 34589.479087 | 14.353032 |
| 16440 | 34589.479087 | 14.566773 |
| 16441 | 34589.479087 | 14.755489 |
| 16442 | 34589.479087 | 15.346082 |
| 16443 | 34589.479087 | 14.141081 |

[16444 rows x 2 columns]

with the most optimal solution:

| | graph_structure | Distance | round |
|---|---|---|---|
| 0 | 34589.479087 | 13.268503 | 34589.0 |

with an acceptance percentage of 0.013341338136215063%

# approximate_bayesian_computation

## Parameters

cm_name: abc_20
dataframe_in: data_missing_20
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: 171451.02623534203
type: calibrationmodel
version: 1.0.0

## Results

Summary CalibrationModel with solutions:

| | graph_structure | Distance |
|---|---|---|
| 0 | 22546.691528 | 37.596752 |
| 1 | 33368.040374 | 33.072546 |
| 2 | 39999.000000 | 27.534924 |
| 3 | 39999.000000 | 27.256194 |
| 4 | 39999.000000 | 27.354808 |
| ... | ... | ... |
| 18245 | 34589.479087 | 14.075979 |
| 18246 | 34589.479087 | 13.899537 |
| 18247 | 34589.479087 | 14.494930 |
| 18248 | 34589.479087 | 13.992228 |
| 18249 | 34589.479087 | 14.185154 |

[18250 rows x 2 columns]

with the most optimal solution:

| | graph_structure | Distance | round |
|---|---|---|---|
| 0 | 34589.479087 | 13.358148 | 34589.0 |

with an acceptance percentage of 0.013341338136215063%

# Summary

| Model Name | Model Method | Score | Difference Function | Dataframe | Duration |
|---|---|---|---|---|---|
| abc_20 | approximate_bayesian_computation | 0.98 | manhattan_metrics | data_missing_20 | 171451.026 sec |
| abc_10 | approximate_bayesian_computation | 0.98 | manhattan_metrics | data_missing_10 | 166783.423 sec |