

# 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: 1  
report\_parameters: {}  
running\_time: 187647.60374116898  
type: calibrationmodel  
version: 1.0.0

## Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	16767.361382	14.200070
1	16767.361382	14.334113
2	16767.361382	14.609773
3	0.000000	15.781932
4	0.000000	16.612014
...	...	...
25929	0.000333	16.239902
25930	0.000333	16.168377
25931	0.000333	15.763999
25932	0.000333	17.391845
25933	0.000334	16.731331

[25934 rows x 2 columns]

with the most optimal solution:

graph\_structure Distance round

0 15988.217867 13.90575 15988.0

with an acceptance percentage of 22.600226802748317%

# 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: 1  
report\_parameters: {}  
running\_time: 189930.17300319672  
type: calibrationmodel  
version: 1.0.0

## Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	16767.361382	14.286859
1	16767.361382	14.426272
2	16767.361382	14.699853
3	0.000000	15.879546
4	0.000000	16.711274
...	...	...
26029	0.000381	16.305963
26030	0.000382	16.635355
26031	0.000382	16.008632
26032	0.000383	16.186824
26033	0.000383	16.322245

[26034 rows x 2 columns]

with the most optimal solution:

graph\_structure Distance round

0 15988.217867 14.027458 15988.0

with an acceptance percentage of 22.582438351900027%

# Summary

Model Name	Model Method	Score	Difference Function	Dataframe	Duration
abc_60	approximate_bayesian_computation	0.97	manhattan_metrics	data_missing_60	189930.173 sec
abc_50	approximate_bayesian_computation	0.97	manhattan_metrics	data_missing_50	187647.604 sec