

# approximate\_bayesian\_computation

## Parameters

cm\_name: abc\_80  
dataframe\_in: data\_missing\_80  
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: 240771.19530892372  
type: calibrationmodel  
version: 1.0.0

## Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	1.676736e+04	57.659201
1	0.000000e+00	52.087501
2	0.000000e+00	52.281660
3	1.598822e+04	50.511338
4	1.598822e+04	47.116988
..	...	...
320	3.898429e-11	46.927878
321	4.060863e-11	47.404799
322	4.223298e-11	49.969109
323	4.385732e-11	44.054387
324	4.548167e-11	44.980458

[325 rows x 2 columns]

with the most optimal solution:

	graph_structure	Distance	round
--	-----------------	----------	-------

0	15988.217867	41.201415	15988.0
---	--------------	-----------	---------

with an acceptance percentage of 0.4936295110399573%

# approximate\_bayesian\_computation

## Parameters

cm\_name: abc\_70  
dataframe\_in: data\_missing\_70  
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: 191078.01239180565  
type: calibrationmodel  
version: 1.0.0

## Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	1.676736e+04	39.856698
1	0.000000e+00	36.281383
2	0.000000e+00	36.801819
3	0.000000e+00	38.972691
4	0.000000e+00	40.911889
...	...	...
2003	3.936379e-09	34.608272
2004	3.936379e-09	35.109371
2005	3.936379e-09	33.675884
2006	0.000000e+00	35.963389
2007	0.000000e+00	34.790456

[2008 rows x 2 columns]

with the most optimal solution:

	graph_structure	Distance	round
0	2.697529e-09	29.837527	0.0
1	2.358035e-09	29.837527	0.0

with an acceptance percentage of 1.950058924243435%

# Summary

Model Name	Model Method	Score	Difference Function	Dataframe	Duration
abc_80	approximate_bayesian_computation	0.97	manhattan_metrics	data_missing_80	240771.195 sec
abc_70	approximate_bayesian_computation	0.96	manhattan_metrics	data_missing_70	191078.012 sec