

# 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: 26  
report\_parameters: {}  
running\_time: 183880.4387280941  
type: calibrationmodel  
version: 1.0.0

## Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	3.159753e+04	43.420786
1	3.156725e+04	40.019960
2	3.999900e+04	28.677581
3	3.999900e+04	27.414790
4	3.999900e+04	26.402571
...	...	...
27494	1.589505e-10	16.186875
27495	1.591465e-10	15.825515
27496	1.591465e-10	15.553366
27497	1.593425e-10	17.216096
27498	1.595385e-10	16.067152

[27499 rows x 2 columns]

with the most optimal solution:

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

0	0.0	14.91951	0.0
---	-----	----------	-----

with an acceptance percentage of 34.92095257154293%

# 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: 26  
report\_parameters: {}  
running\_time: 184040.1213786602  
type: calibrationmodel  
version: 1.0.0

## Results

Summary CalibrationModel with solutions:

	graph_structure	Distance
0	31597.533350	43.637260
1	31567.248932	40.210732
2	10191.124749	37.568005
3	21260.288346	39.059831
4	10498.755033	15.079273
...	...	...
21497	0.205181	17.202243
21498	0.205326	15.799550
21499	0.205470	15.567932
21500	0.205615	15.686073
21501	0.205615	15.768394

[21502 rows x 2 columns]

with the most optimal solution:

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

0	0.0	14.580596	0.0
---	-----	-----------	-----

with an acceptance percentage of 29.2553309763636%

# Summary

Model Name	Model Method	Score	Difference Function	Dataframe	Duration
abc_80	approximate_bayesian_computation	0.96	manhattan_metrics	data_missing_80	183880.439 sec
abc_70	approximate_bayesian_computation	0.96	manhattan_metrics	data_missing_70	184040.121 sec