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:
  - Manufacturing_Time
  epsilons:
  - 1
  n_chains: 3
  n_draws: 20000
  n_iterations: 100
  nfe: 15000
  objectives:
  - Manufacturer
  - Export_Port
  - Transit_Port
  - Import_Port
  - Wholesales_Distributor
  - Retailer_Amsterdam
  - Retailer_Utrecht
  - Retailer_Venlo
  population_size: 100
  ranges_variables:
  - - 1
     - 10
  seed: 35
report_parameters: {}
running_time: 255499.5835134983
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	Manufacturing_Time	Distance
0	8.170457	21.061524
1	7.990758	19.547006
2	5.024638	17.453019
3	2.058517	8.544054
4	2.058517	8.544054
...	...	...
9536	2.346832	5.310269
9537	2.346832	5.310269
9538	2.346832	5.310269
9539	2.346832	5.310269

9540 2.256717 6.252713

[9541 rows x 2 columns]
with the most optimal solution:

	Manufacturing_Time	Distance
0	2.346832	5.310269
1	2.346832	5.310269
2	2.346832	5.310269
3	2.346832	5.310269
4	2.346832	5.310269
..	...	...
753	2.346832	5.310269
754	2.346832	5.310269
755	2.346832	5.310269
756	2.346832	5.310269
757	2.346832	5.310269

[758 rows x 2 columns]
with an acceptance percentage of 16.053890917579576%

approximate_bayesian_computation

Parameters

cm_name: abc_25
dataframe_in: data_missing_25
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:
  - Manufacturing_Time
  epsilons:
  - 1
  n_chains: 3
  n_draws: 20000
  n_iterations: 100
  nfe: 15000
  objectives:
  - Manufacturer
  - Export_Port
  - Transit_Port
  - Import_Port
  - Wholesales_Distributor
  - Retailer_Amsterdam
  - Retailer_Utrecht
  - Retailer_Venlo
  population_size: 100
  ranges_variables:
  - - 1
     - 10
  seed: 35
report_parameters: {}
running_time: 245285.11929559708
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	Manufacturing_Time	Distance
0	8.170457	22.201507
1	7.990758	18.919396
2	5.024638	15.731514
3	2.058517	11.605301
4	2.058517	11.605301
..	...	...
948	2.524711	6.313893
949	2.524711	6.313893
950	2.526930	6.991528
951	2.529149	6.164305

952 2.527049 7.758581

[953 rows x 2 columns]
with the most optimal solution:
Manufacturing_Time Distance
0 2.529149 6.164305
with an acceptance percentage of 3.01135510979941%

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:
  - Manufacturing_Time
  epsilons:
  - 1
  n_chains: 3
  n_draws: 20000
  n_iterations: 100
  nfe: 15000
  objectives:
  - Manufacturer
  - Export_Port
  - Transit_Port
  - Import_Port
  - Wholesales_Distributor
  - Retailer_Amsterdam
  - Retailer_Utrecht
  - Retailer_Venlo
  population_size: 100
  ranges_variables:
  - - 1
     - 10
  seed: 35
report_parameters: {}
running_time: 218348.1482717991
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	Manufacturing_Time	Distance
0	10.000000	23.9034
1	10.000000	23.9034
2	10.000000	23.9034
3	10.000000	23.9034
4	10.000000	23.9034
...	...	...
17522	9.999998	23.9034
17523	9.999998	23.9034
17524	9.999999	23.9034
17525	9.999999	23.9034

17526 10.000000 23.9034

[17527 rows x 2 columns]
with the most optimal solution:
Manufacturing_Time Distance
0 5.122495 23.016098
with an acceptance percentage of 46.55761759458423%

approximate_bayesian_computation

Parameters

cm_name: abc_75
dataframe_in: data_missing_75
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:
  - Manufacturing_Time
  epsilons:
  - 1
  n_chains: 3
  n_draws: 20000
  n_iterations: 100
  nfe: 15000
  objectives:
  - Manufacturer
  - Export_Port
  - Transit_Port
  - Import_Port
  - Wholesales_Distributor
  - Retailer_Amsterdam
  - Retailer_Utrecht
  - Retailer_Venlo
  population_size: 100
  ranges_variables:
  - - 1
     - 10
  seed: 35
report_parameters: {}
running_time: 231837.28987193108
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	Manufacturing_Time	Distance
0	8.170457	24.514535
1	7.990758	23.128260
2	5.024638	18.629773
3	2.058517	13.888715
4	2.058517	13.888715
...	...	...
3265	2.346832	10.978606
3266	2.346832	10.978606
3267	2.346832	10.978606
3268	2.346832	10.978606

3269 2.351605 11.337496

[3270 rows x 2 columns]
with the most optimal solution:

	Manufacturing_Time	Distance
0	2.346832	10.978606
1	2.346832	10.978606
2	2.346832	10.978606
3	2.346832	10.978606
4	2.346832	10.978606
...	...	...
1965	2.346832	10.978606
1966	2.346832	10.978606
1967	2.346832	10.978606
1968	2.346832	10.978606
1969	2.346832	10.978606

[1970 rows x 2 columns]
with an acceptance percentage of 6.271155353242293%

approximate_bayesian_computation

Parameters

cm_name: abc_90
dataframe_in: data_missing_90
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:
  - Manufacturing_Time
  epsilons:
  - 1
  n_chains: 3
  n_draws: 20000
  n_iterations: 100
  nfe: 15000
  objectives:
  - Manufacturer
  - Export_Port
  - Transit_Port
  - Import_Port
  - Wholesales_Distributor
  - Retailer_Amsterdam
  - Retailer_Utrecht
  - Retailer_Venlo
  population_size: 100
  ranges_variables:
  - - 1
     - 10
  seed: 35
report_parameters: {}
running_time: 239943.2206223011
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	Manufacturing_Time	Distance
0	5.122495	18.673627
1	2.156374	9.832171
2	2.156374	9.832171
3	2.156374	9.832171
4	2.156374	9.832171
...	...	...
4365	2.156397	10.848938
4366	2.156397	10.848938
4367	2.156397	10.848938
4368	2.156397	10.848938

4369 2.156398 9.204387

[4370 rows x 2 columns]
with the most optimal solution:
Manufacturing_Time Distance
0 2.163914 7.573303
1 2.163915 7.573303
2 2.163915 7.573303
3 2.163915 7.573303
with an acceptance percentage of 8.081970219932304%

genetic_algorithm
Parameters

cm_name: ga_10
dataframe_in: data_missing_10
description: Genetic Algorithm for optimization of timeseries
diff_func_name: manhattan_metrics
diff_func_parameters: {}
model_method: genetic_algorithm
name: genetic_algorithm
parameters:
    algorithm: epsNSGAII
    decision_variables:
    - Manufacturing_Time
    epsilons:
    - 1
    n_draws: 20000
    n_iterations: 100
    nfe: 15000
    objectives:
    - Manufacturer
    - Export_Port
    - Transit_Port
    - Import_Port
    - Wholesales_Distributor
    - Retailer_Amsterdam
    - Retailer_Utrecht
    - Retailer_Venlo
    population_size: 100
    ranges_variables:
    -   - 1
        - 10
    seed: 35
report_parameters: {}
running_time: 178936.59577298164
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions
    Manufacturing_Time Manufacturer Export_Port Transit_Port Import_Port Wholesales_Distributor
Retailer_Amsterdam Retailer_Utrecht Retailer_Venlo
0   2.406842   1.996493   1.996493   1.996493   1.996493   1.996493   1.996493
1.996493   1.996493
 and eprogress is [9, 10, 10, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11,
11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11,
11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12,
12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12,
12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12]

genetic_algorithm
Parameters

cm_name: ga_25
dataframe_in: data_missing_25
description: Genetic Algorithm for optimization of timeseries
diff_func_name: manhattan_metrics
diff_func_parameters: {}
model_method: genetic_algorithm
name: genetic_algorithm
parameters:
  algorithm: epsNSGAII
  decision_variables:
  - Manufacturing_Time
  epsilons:
  - 1
  n_draws: 20000
  n_iterations: 100
  nfe: 15000
  objectives:
  - Manufacturer
  - Export_Port
  - Transit_Port
  - Import_Port
  - Wholesales_Distributor
  - Retailer_Amsterdam
  - Retailer_Utrecht
  - Retailer_Venlo
  population_size: 100
  ranges_variables:
  -   - 1
      - 10
  seed: 35
report_parameters: {}
running_time: 179338.86256241798
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions
   Manufacturing_Time Manufacturer Export_Port Transit_Port Import_Port Wholesales_Distributor
Retailer_Amsterdam Retailer_Utrecht Retailer_Venlo
0 2.373531 2.466105 2.466105 2.466105 2.466105 2.466105 2.466105
2.466105 2.466105
 and eprogress is [7, 7, 8, 8, 8, 8, 8, 8, 8, 9, 9, 9, 9, 9, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 12]

genetic_algorithm
Parameters

cm_name: ga_50
dataframe_in: data_missing_50
description: Genetic Algorithm for optimization of timeseries
diff_func_name: manhattan_metrics
diff_func_parameters: {}
model_method: genetic_algorithm
name: genetic_algorithm
parameters:
    algorithm: epsNSGAII
    decision_variables:
    - Manufacturing_Time
    epsilons:
    - 1
    n_draws: 20000
    n_iterations: 100
    nfe: 15000
    objectives:
    - Manufacturer
    - Export_Port
    - Transit_Port
    - Import_Port
    - Wholesales_Distributor
    - Retailer_Amsterdam
    - Retailer_Utrecht
    - Retailer_Venlo
    population_size: 100
    ranges_variables:
    -   - 1
        - 10
    seed: 35
report_parameters: {}
running_time: 179466.66464543343
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions
   Manufacturing_Time Manufacturer Export_Port Transit_Port Import_Port Wholesales_Distributor
Retailer_Amsterdam Retailer_Utrecht Retailer_Venlo
0   2.506551   5.893441   5.893441   5.893441   5.893441   5.893441   5.893441
5.893441   5.893441
 and eprogress is [5, 6, 6, 6, 6, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7,
7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8,
8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9,
9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9]

genetic_algorithm
Parameters

cm_name: ga_75
dataframe_in: data_missing_75
description: Genetic Algorithm for optimization of timeseries
diff_func_name: manhattan_metrics
diff_func_parameters: {}
model_method: genetic_algorithm
name: genetic_algorithm
parameters:
    algorithm: epsNSGAII
    decision_variables:
    - Manufacturing_Time
    epsilons:
    - 1
    n_draws: 20000
    n_iterations: 100
    nfe: 15000
    objectives:
    - Manufacturer
    - Export_Port
    - Transit_Port
    - Import_Port
    - Wholesales_Distributor
    - Retailer_Amsterdam
    - Retailer_Utrecht
    - Retailer_Venlo
    population_size: 100
    ranges_variables:
    -   - 1
        - 10
    seed: 35
report_parameters: {}
running_time: 179875.99396705627
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions
    Manufacturing_Time Manufacturer Export_Port Transit_Port Import_Port Wholesales_Distributor
Retailer_Amsterdam Retailer_Utrecht Retailer_Venlo
0   2.396774   7.141109   7.141109   7.141109   7.141109   7.141109   7.141109
7.141109   7.141109
 and eprogress is [11, 11, 11, 12, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 13, 14, 14,
14, 14, 14, 14, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15,
15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15,
15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15,
15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15]

genetic_algorithm
Parameters

cm_name: ga_90
dataframe_in: data_missing_90
description: Genetic Algorithm for optimization of timeseries
diff_func_name: manhattan_metrics
diff_func_parameters: {}
model_method: genetic_algorithm
name: genetic_algorithm
parameters:
    algorithm: epsNSGAII
    decision_variables:
    - Manufacturing_Time
    epsilons:
    - 1
    n_draws: 20000
    n_iterations: 100
    nfe: 15000
    objectives:
    - Manufacturer
    - Export_Port
    - Transit_Port
    - Import_Port
    - Wholesales_Distributor
    - Retailer_Amsterdam
    - Retailer_Utrecht
    - Retailer_Venlo
    population_size: 100
    ranges_variables:
    -   - 1
        - 10
    seed: 35
report_parameters: {}
running_time: 179742.5353705883
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions
   Manufacturing_Time Manufacturer Export_Port Transit_Port Import_Port Wholesales_Distributor
Retailer_Amsterdam Retailer_Utrecht Retailer_Venlo
0   2.716299   5.381551   5.381551   5.381551   5.381551   5.381551   5.381551
5.381551   5.381551
 and eprogress is [9, 10, 11, 11, 11, 12, 12, 13, 13, 13, 13, 13, 14, 14, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 16, 17, 17, 17, 17, 17, 17, 17, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18, 18]

powell_method

Parameters

cm_name: powell_10
dataframe_in: data_missing_10
description: Powell Method for optimization of timeseries with simulation
diff_func_name: manhattan_metrics
diff_func_parameters: {}
model_method: powell_method
name: powell_method
parameters:
  decision_variables:
  - Manufacturing_Time
  epsilons:
  - 1
  n_draws: 20000
  n_iterations: 100
  nfe: 1500
  objectives:
  - Manufacturer
  - Export_Port
  - Transit_Port
  - Import_Port
  - Wholesales_Distributor
  - Retailer_Amsterdam
  - Retailer_Utrecht
  - Retailer_Venlo
  population_size: 100
  ranges_variables:
  - - 1
     - 10
  seed: 35
report_parameters: {}
running_time: 521.5069541931152
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with most optimal solution:

	Manufacturing_Time	Distance
0	2.377718	3.137647

powell_method

Parameters

cm_name: powell_25
dataframe_in: data_missing_25
description: Powell Method for optimization of timeseries with simulation
diff_func_name: manhattan_metrics
diff_func_parameters: {}
model_method: powell_method
name: powell_method
parameters:
  decision_variables:
  - Manufacturing_Time
  epsilons:
  - 1
  n_draws: 20000
  n_iterations: 100
  nfe: 1500
  objectives:
  - Manufacturer
  - Export_Port
  - Transit_Port
  - Import_Port
  - Wholesales_Distributor
  - Retailer_Amsterdam
  - Retailer_Utrecht
  - Retailer_Venlo
  population_size: 100
  ranges_variables:
  - - 1
     - 10
  seed: 35
report_parameters: {}
running_time: 556.8210067749023
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with most optimal solution:

	Manufacturing_Time	Distance
0	2.360249	2.823319

powell_method

Parameters

cm_name: powell_50
dataframe_in: data_missing_50
description: Powell Method for optimization of timeseries with simulation
diff_func_name: manhattan_metrics
diff_func_parameters: {}
model_method: powell_method
name: powell_method
parameters:
  decision_variables:
  - Manufacturing_Time
  epsilons:
  - 1
  n_draws: 20000
  n_iterations: 100
  nfe: 1500
  objectives:
  - Manufacturer
  - Export_Port
  - Transit_Port
  - Import_Port
  - Wholesales_Distributor
  - Retailer_Amsterdam
  - Retailer_Utrecht
  - Retailer_Venlo
  population_size: 100
  ranges_variables:
  - - 1
     - 10
  seed: 35
report_parameters: {}
running_time: 607.7763347625732
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with most optimal solution:

	Manufacturing_Time	Distance
0	6.562306	13.955558

powell_method

Parameters

cm_name: powell_75
dataframe_in: data_missing_75
description: Powell Method for optimization of timeseries with simulation
diff_func_name: manhattan_metrics
diff_func_parameters: {}
model_method: powell_method
name: powell_method
parameters:
  decision_variables:
  - Manufacturing_Time
  epsilons:
  - 1
  n_draws: 20000
  n_iterations: 100
  nfe: 1500
  objectives:
  - Manufacturer
  - Export_Port
  - Transit_Port
  - Import_Port
  - Wholesales_Distributor
  - Retailer_Amsterdam
  - Retailer_Utrecht
  - Retailer_Venlo
  population_size: 100
  ranges_variables:
  - - 1
     - 10
  seed: 35
report_parameters: {}
running_time: 1798.311290025711
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with most optimal solution:

	Manufacturing_Time	Distance
0	2.999161	10.082865

powell_method

Parameters

cm_name: powell_90
dataframe_in: data_missing_90
description: Powell Method for optimization of timeseries with simulation
diff_func_name: manhattan_metrics
diff_func_parameters: {}
model_method: powell_method
name: powell_method
parameters:
  decision_variables:
  - Manufacturing_Time
  epsilons:
  - 1
  n_draws: 20000
  n_iterations: 100
  nfe: 1500
  objectives:
  - Manufacturer
  - Export_Port
  - Transit_Port
  - Import_Port
  - Wholesales_Distributor
  - Retailer_Amsterdam
  - Retailer_Utrecht
  - Retailer_Venlo
  population_size: 100
  ranges_variables:
  - - 1
     - 10
  seed: 35
report_parameters: {}
running_time: 494.224484205246
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with most optimal solution:

	Manufacturing_Time	Distance
0	3.124612	8.251935

Summary

Model Name	Model Method	Score	Difference Function	Dataframe	Duration	Solution Params
powell_90	powell_method	0.93	manhattan_metrics	data_missing_90	494.224 sec	{'Manufacturing_Time': 3.1246117974981074}
powell_75	powell_method	0.94	manhattan_metrics	data_missing_75	1798.311 sec	{'Manufacturing_Time': 2.9991606143145035}
powell_50	powell_method	0.55	manhattan_metrics	data_missing_50	607.776 sec	{'Manufacturing_Time': 6.562305898749053}
powell_25	powell_method	0.98	manhattan_metrics	data_missing_25	556.821 sec	{'Manufacturing_Time': 2.3602488890120137}
powell_10	powell_method	0.99	manhattan_metrics	data_missing_10	521.507 sec	{'Manufacturing_Time': 2.377717816139713}
ga_90	genetic_algorithm	0.98	manhattan_metrics	data_missing_90	179742.535 sec	{'Manufacturing_Time': 2.716299315100732}
ga_75	genetic_algorithm	0.99	manhattan_metrics	data_missing_75	179875.994 sec	{'Manufacturing_Time': 2.3967737331530987}
ga_50	genetic_algorithm	1.0	manhattan_metrics	data_missing_50	179466.665 sec	{'Manufacturing_Time': 2.5065509414724105}
ga_25	genetic_algorithm	0.99	manhattan_metrics	data_missing_25	179338.863 sec	{'Manufacturing_Time': 2.373530882200689}
ga_10	genetic_algorithm	0.99	manhattan_metrics	data_missing_10	178936.596 sec	{'Manufacturing_Time': 2.406842496375807}
abc_90	approximate_bayesian_computation	0.96	manhattan_metrics	data_missing_90	239943.221 sec	{'Manufacturing_Time': 2.163914365059573}
abc_75	approximate_bayesian_computation	0.98	manhattan_metrics	data_missing_75	231837.290 sec	{'Manufacturing_Time': 2.3468319610874366}
abc_50	approximate_bayesian_computation	0.71	manhattan_metrics	data_missing_50	218348.148 sec	{'Manufacturing_Time': 5.122494534016814}
abc_25	approximate_bayesian_computation	1.0	manhattan_metrics	data_missing_25	245285.119 sec	{'Manufacturing_Time': 2.529149269362847}
abc_10	approximate_bayesian_computation	0.98	manhattan_metrics	data_missing_10	255499.584 sec	{'Manufacturing_Time': 2.346831961093004}