

approximate_bayesian_computation

Parameters

cm_name: abc_0
dataframe_in: data_0
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
 convergence_progress: true
 decision_variables:
 - Manufacturing_Time
 n_chains: 3
 n_draws: 15000
 objectives:
 - Manufacturer
 - Export_Port
 - Transit_Port
 - Import_Port
 - Wholesales_Distributor
 - Retailer_Amsterdam
 - Retailer_Utrecht
 - Retailer_Venlo
 ranges_variables:
 - - 1
 - 10
 seed: 20
report_parameters: {}
running_time: 91986.42876195908
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	Manufacturing_Time	Distance
0	6.293177	16.149169
1	6.293177	16.149169
2	6.293177	16.149169
3	6.293177	16.149169
4	6.293177	16.149169
...
7292	1.993078	6.320627
7293	1.993078	6.320627
7294	1.993078	6.320627
7295	1.993078	6.320627
7296	1.993078	6.320627

[7297 rows x 2 columns]

Manufacturing_Time Distance

[516 rows x 2 columns]

[illegible]

[illegible]

Parameters

```
cm_name: ga_epsNSGAll_0
dataframe_in: data_0
description: Genetic Algorithm for optimization of timeseries
diff_func_name: manhattan_metrics
diff_func_parameters: {}
model_method: genetic_algorithm
name: genetic_algorithm
parameters:
  algorithm: epsNSGAll
  decision_variables:
    - Manufacturing_Time
  epsilons:
    - 1
  multi_objective: false
  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: 20
report_parameters: {}
running_time: 87789.04184961319
type: calibrationmodel
version: 1.0.0
```

Results

Summary CalibrationModel with solutions

Manufacturer	Export_Port	Transit_Port	Import_Port	Wholesales_Distributor
Manufacturer_Amsterdam	Manufacturer_Utrecht	Manufacturer_Venlo		
0	2.175932	2.629312	2.629312	2.629312
2.629312	2.629312			

[illegible]

powell_method

Parameters

cm_name: powell_0
dataframe_in: data_0
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
 n_iterations: 100
 nfe: 1500
 objectives:
 - Manufacturer
 - Export_Port
 - Transit_Port
 - Import_Port
 - Wholesales_Distributor
 - Retailer_Amsterdam
 - Retailer_Utrecht
 - Retailer_Venlo
 ranges_variables:
 - - 1
 - - 10
 seed: 20
report_parameters: {}
running_time: 338.8564577102661
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with most optimal solution:

	Manufacturing_Time	Distance
0	3.126223	6.094983

Summary

Model Name	Model Method	Score	Difference Function	Dataframe	Duration	Solution Params
powell_0	powell_method	0.93	manhattan_metrics	data_0	338.856 sec	{'Manufacturing_Time': 3.126223077692396}
ga_epsNSGAII_0	genetic_algorithm	0.96	manhattan_metrics	data_0	87789.042 sec	{'Manufacturing_Time': 2.175932452732771}
abc_0	approximate_bayesian_computation	0.98	manhattan_metrics	data_0	91986.429 sec	{'Manufacturing_Time': 2.3278617755876225}