

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: 10
report_parameters: {}
running_time: 92019.50797629356
type: calibrationmodel
version: 1.0.0

Results

Summary CalibrationModel with solutions:

	Manufacturing_Time	Distance
0	1.0	13.772067
1	1.0	13.772067
2	1.0	13.772067
3	1.0	13.772067

with the most optimal solution:

	Manufacturing_Time	Distance
0	1.0	13.772067
1	1.0	13.772067
2	1.0	13.772067
3	1.0	13.772067

with an acceptance percentage of [0.0005365526492287056, 0.0005365526492287056, 0.0004024144869215292, 0.0005365526492287056, 0.0005365526492287056, 0.0004024144869215292, 0.0005365526492287056, 0.0005365526492287056, 0.0004024144869215292, 0.0005365526492287056, 0.0005365526492287056,

[illegible]

[illegible]

genetic_algorithm

```

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: 10
report_parameters: {}
running_time: 86818.06837916374
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	2.406841	2.578403	2.578403	2.578403	2.578403
2.578403	2.578403				

[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: 10
report_parameters: {}
running_time: 338.11551094055176
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	338.116 sec	{'Manufacturing_Time': 3.126223077692396}
ga_epsNSGAII_0	genetic_algorithm	0.99	manhattan_metrics	data_0	86818.068 sec	{'Manufacturing_Time': 2.4068409622483227}
abc_0	approximate_bayesian_computation	0.83	manhattan_metrics	data_0	92019.508 sec	{'Manufacturing_Time': 1.0}