

COMET method

a short manual

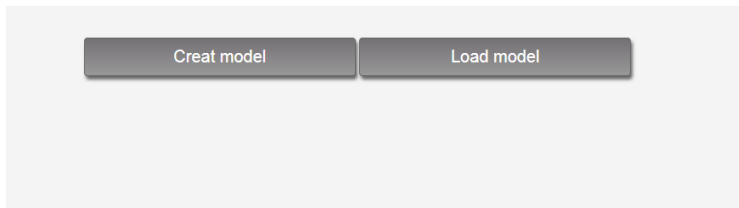
Wojciech Sałabun

www.comet.edu.pl

January 1, 2019

Create a new model

Click on the button 'Creat model'



In this presentation will be shown a short example to show how to identify the model to evaluate a car attractiveness.

Select a number of criteria

If you need more than two criteria press '+' icon so many times as you need. One row is addressed to one criterion.

Criterion name	Characteristic values (separate by comma)
<input type="text" value="name.."/>	<input type="text" value="values.."/>
<input type="text" value="name.."/>	<input type="text" value="values.."/>

Example with two criteria

We select two criteria, i.e., 'price' [PLN] and 'quality' [%]. For 'price' criterion, three characteristic value have been selected. Model is defined in the domain from 10,000 to 20,000. An expert select as average value 15,000. Therefore, we have 10000,15000,20000 in the second column. The analogously procedure is used for 'quality' criterion.

Criterion name	Characteristic values (separate by comma)
<input type="text" value="price"/>	<input type="text" value="10000,15000,20000"/>
<input type="text" value="quality"/>	<input type="text" value="0,65,100"/>
<input data-bbox="230 723 263 747" type="button" value="+"/>	<input data-bbox="1012 733 1108 768" type="button" value="Next >"/>

Pairwise Comparison

The pair of two characteristic objects is shown. An expert (decision-maker) should select which one is better (which one is win) or eventually select 'Draw'. For this example, we have to make 36 pairwise comparisons.

The screenshot displays a pairwise comparison interface. On the left, a box contains the text "price - 15000" and "quality - 0". Below this box is a "Win" button. In the center, the text "Objects number: 9" and "Pairs left: 36" is displayed. Below this text is a "Draw" button. On the right, a box contains the text "price - 20000" and "quality - 100". Below this box is a "Win" button.

Pairwise Comparison

Only 3 pairwise comparison left :)

The screenshot displays a pairwise comparison interface. On the left, a box contains the text "price - 10000" and "quality - 0". Below this box is a button labeled "Win". In the center, the text "Objects number: 9" and "Pairs left: 3" is displayed. Below this text is a button labeled "Draw". On the right, a box contains the text "price - 15000" and "quality - 100". Below this box is a button labeled "Win".

Rule Base

After last pairwise comparison, we will see the complete rule base.
We can save data to file or press next button.

```
IF price: 10000 AND quality: 0 THEN 0.2857
IF price: 10000 AND quality: 65 THEN 0.8571
IF price: 10000 AND quality: 100 THEN 1.0000
IF price: 15000 AND quality: 0 THEN 0.1429
IF price: 15000 AND quality: 65 THEN 0.5714
IF price: 15000 AND quality: 100 THEN 0.8571
IF price: 20000 AND quality: 0 THEN 0.0000
IF price: 20000 AND quality: 65 THEN 0.4286
IF price: 20000 AND quality: 100 THEN 0.7143
```

[Save as](#)[Next >](#)

Inference - exploit of model

If we have one alternative, e.g., $A_1 = [13500, 44]$, we use option for a single alternative (as in figure below). We get 0.5048 as assessment of this car.



Inference - exploit of model

If we have more alternatives, e.g., $A_1 = [16000, 67]$; $A_2 = [15000, 65]$; $A_3 = [17500, 75]$, we use option for a alternatives set (as in figure below). We get 0.5591, 0.5714 and 0.5816 as assessments of these cars.



More information you can find at:
www.comet.edu.pl