

trendingBot

case study #1 - beauty contest

trendingIT

the problem

Trainer of beauty-contest models → which attributes are more relevant to the judges?

1. get some information from previous years (same judges)
2. run trendingBot

1. The data

hair		eyes		bust	waist	hips	score
colour	long/short	colour	size	[cm]	[cm]	[cm]	
blond	long	blue	big	90	60	90	9.5
black	short	green	small	95	58	92	9.5
brown	long	brown	medium	85	62	100	8.2
black	short	green	small	95	58	92	7
blond	short	blue	small	90	60	90	9.5
blond	short	blue	small	90	60	100	7.5

cases

unacceptable
incoherent behaviour

inputs

output

the solution

2. TrendingBot

- ✓ all the inputs in a numerical form
 - fictitious scales between two arbitrary extremes
 - example: numerical scale for the hair colour →

Black	10	
Brown	5	light black 7.5
Blond	0	dark blond 2.5
- ✓ “incoherent behaviours” not allowed
 - same inputs + different output = wrong input selection
 - solutions
 - taking into account some additional inputs
 - considering this case as an exception (last resource)

$$8.199 - 1.753 \cdot 10^{-7} \cdot (\text{hair_col} \cdot \text{hips})^{-1} + 1.683 \cdot 10^{-15} \cdot (\text{hair_col} \cdot \text{hips})^{-2}$$

scales	hair_col	black = 10	hair_length	long = 10	eyes_col	brown = 10	eyes_size	big = 10
		brown = 5		medium = 5		green = 5		medium = 5
		blond = 0		short = 0		blue = 0		small = 0

mean error after applying this equation to the original data below 0.001% ✓

a valid trend was found