

Banana Database

Membership Functions for 2 Attributes:

For Attribute1:

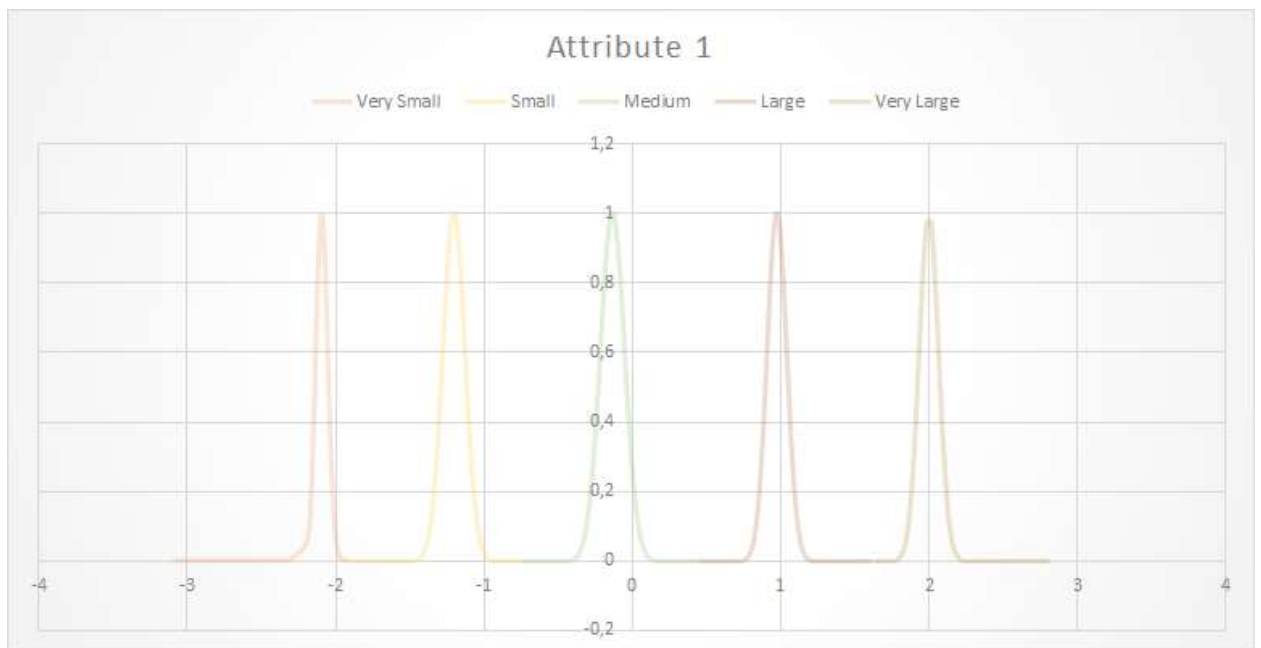
$$\text{Very small: } f = e^{-\frac{x+2.09603}{0.05683}};$$

$$\text{Small: } f = e^{-\frac{x+1.20761}{0.105265}};$$

$$\text{Medium: } f = e^{-\frac{x+0.13451}{0.116203}};$$

$$\text{Large: } f = e^{-\frac{x-0.976095}{0.093193}};$$

$$\text{Very large: } f = e^{-\frac{x-1.996647}{0.092057}}.$$



For Attribute2:

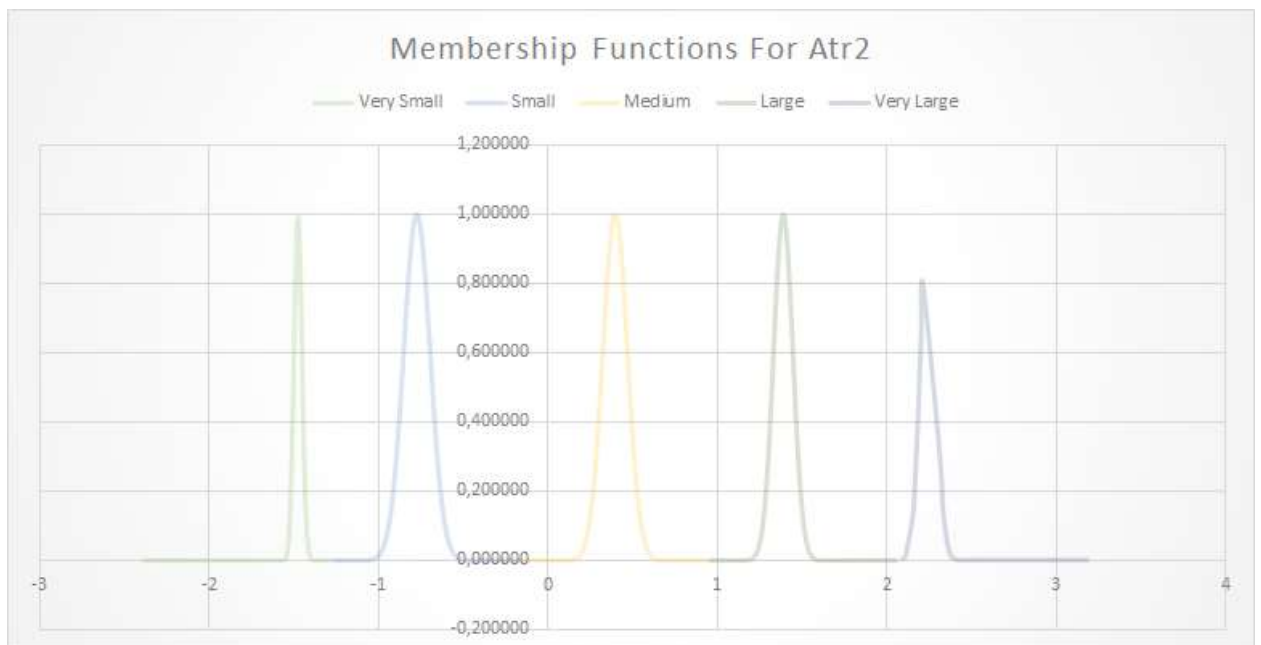
$$\text{Very small: } f = e^{-\frac{x+1.47377}{0.032943}};$$

$$\text{Small: } f = e^{-\frac{x+0.77476}{0.108979}};$$

$$\text{Medium: } f = e^{-\frac{x-0.393977}{0.102341}};$$

$$\text{Large: } f = e^{-\frac{x-1.388358}{0.079547}};$$

$$\text{Very large: } f = e^{-\frac{x-2.240526}{0.063172}}.$$



Initial Data:

Class	Atr1	Atr2
-1	0,0379	-1,64
-1	-0,796	-1,63
-1	-0,575	-1,62
-1	-0,566	-1,62
-1	-0,486	-1,62
-1	0,123	-1,62
-1	-0,956	-1,61
-1	-0,97	-1,6
-1	-0,597	-1,6
-1	-0,379	-1,6
-1	-0,888	-1,59
-1	-0,881	-1,59
-1	-0,45	-1,59
-1	0,0544	-1,59
-1	-0,934	-1,58
...	...	...
1	1,14	-1,57
1	1,26	-1,57
1	1,15	-1,56
1	1,2	-1,56
1	0,976	-1,53
1	-1,66	-1,52
1	1,15	-1,52
1	1,37	-1,52
1	1,44	-1,52
1	-2,11	-1,51
1	-1,42	-1,51
1	-1,92	-1,5
1	-1,78	-1,49
1	1,32	-1,48
1	1,41	-1,48
...	...	...

Table of Rules:

If x1	AND x2	THEN
very small	small	-1
large	very large	1
medium	medium	other

Evaluated Rules:

№	-1	1	Result
1	-1	1	Good
2	-1	1	Good
3	-1	1	Good
4	-1	1	Good
5	-1	1	Good
6	other	1	Not good
7	-1	1	Good
8	-1	1	Good
9	-1	1	Good
10	-1	1	Good
11	-1	1	Good
12	1	1	Not good
13	-1	1	Good
14	-1	1	Good
15	-1	1	Good
Success Rate:	87%	100%	87%