

CCOD

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Banana Database

Membership Functions for 2 Attributes:

For Attribute1:

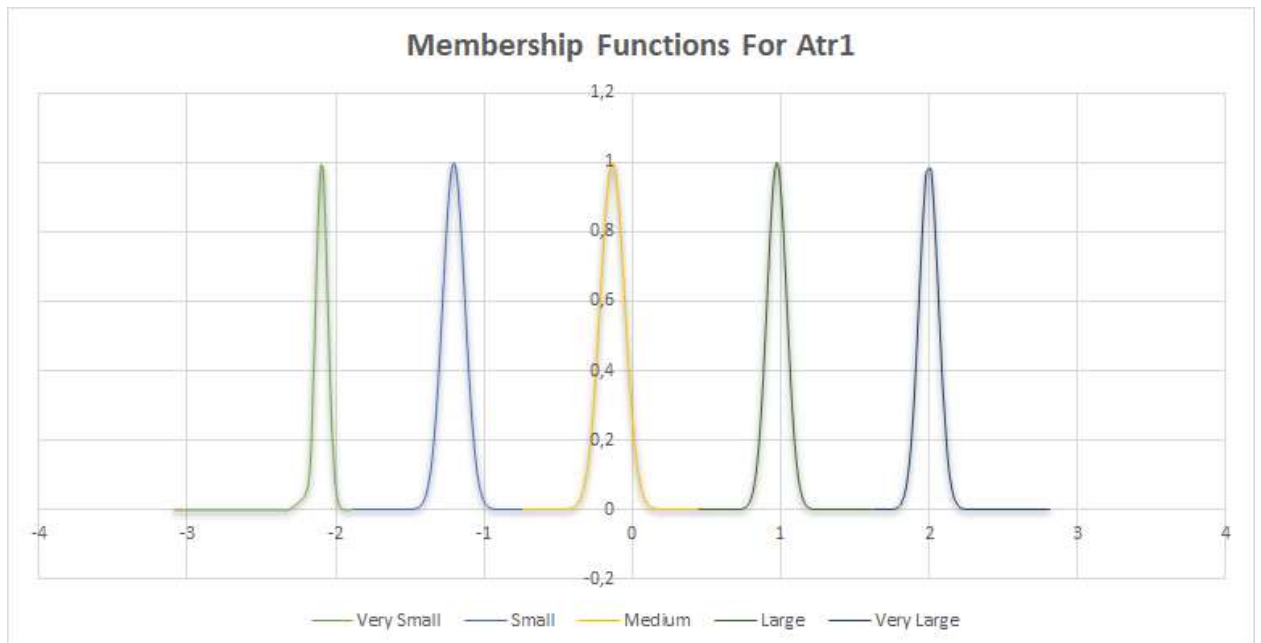
$$\text{Very small: } f = e^{-\frac{x+2.09603}{0.05683}};$$

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

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

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

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



For Attribute2:

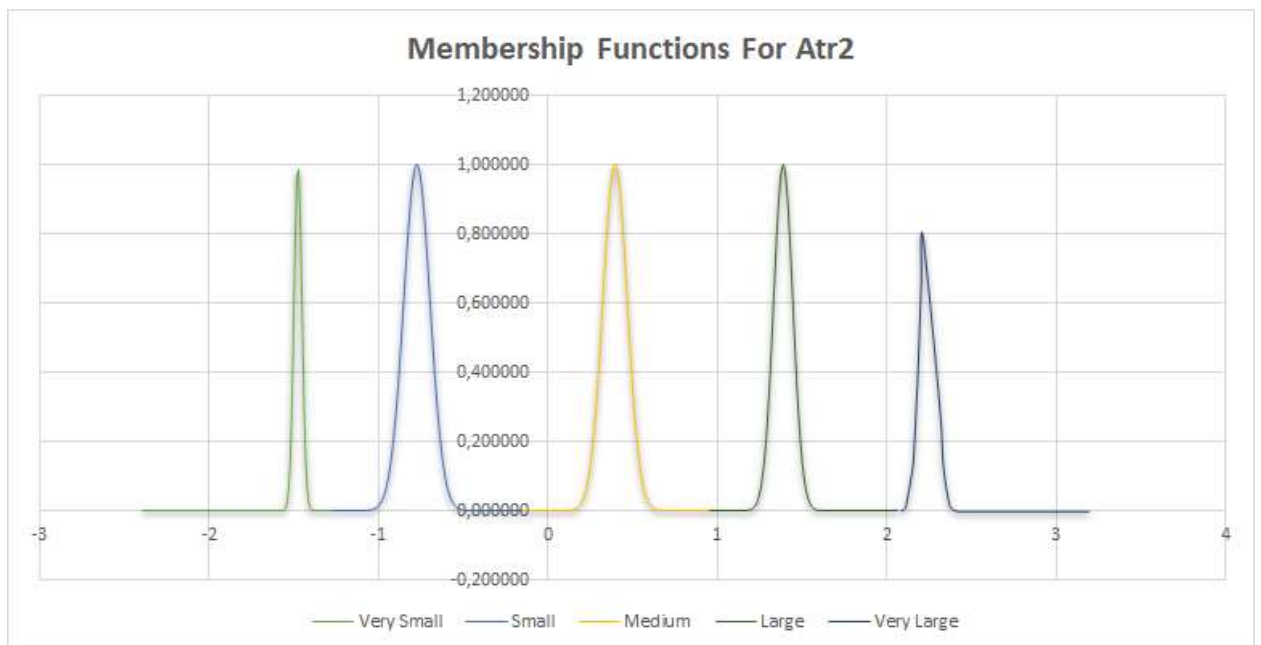
$$\text{Very small: } f = e^{-\frac{x+1.47377}{0.032943}};$$

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

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

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

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



For initial data we use 2/3 of Banana Database. Table is very big, so we show some values for example.

Class	Atr1	Atr2
-1	2,22	-2,04
-1	-0,103	-1,71
-1	0,196	-1,71
-1	-0,508	-1,7
-1	-0,362	-1,7
-1	-0,697	-1,69
-1	-0,335	-1,69
-1	-0,129	-1,69
-1	-0,826	-1,67
-1	-0,558	-1,67
-1	-0,126	-1,67
-1	0,105	-1,67
-1	-0,0958	-1,66
-1	-0,0339	-1,66
-1	-1,01	-1,65
-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	1,23	-2,2
1	1,63	-2,16
1	-2	-2,1
1	1,41	-2,09
1	1,05	-2,08
1	-1,65	-2,05
1	1,47	-2,05
1	-1,64	-1,91
1	0,952	-1,9
1	-1,69	-1,87
1	-2,01	-1,85
1	-1,62	-1,85
1	-1,74	-1,83
1	1,08	-1,83
1	1,31	-1,81
1	1,53	-1,81
1	1,34	-1,8
1	-2,08	-1,78
1	-1,82	-1,78
1	1,45	-1,78
...	...	...

Table of Rules:

If x1(Atr1)	AND x2(Atr2)	THEN(Class)
large	medium	-1
small	very small	1
medium	very large	other

Evaluated Rules at 20 random values of 1/3 of Banana Database:

No Data	Class (-1)	Class (1)	Result
1	-1	1	Good
2	-1	1	Good
3	-1	1	Good
4	-1	-1	Not good!
5	-1	1	Good
6	-1	1	Good
7	-1	1	Good
8	-1	other	Not good!
9	-1	1	Good
10	-1	1	Good
11	-1	1	Good
12	-1	1	Good
13	-1	1	Good
14	-1	-1	Not good!
15	-1	1	Good
16	-1	1	Good
17	-1	1	Good
18	-1		Good
19	-1		Good
20	-1		Good
Success Rate:	100%	82,35%	82,35%