

CCOD

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Lab 6, 14.10.2016

Table of rules:

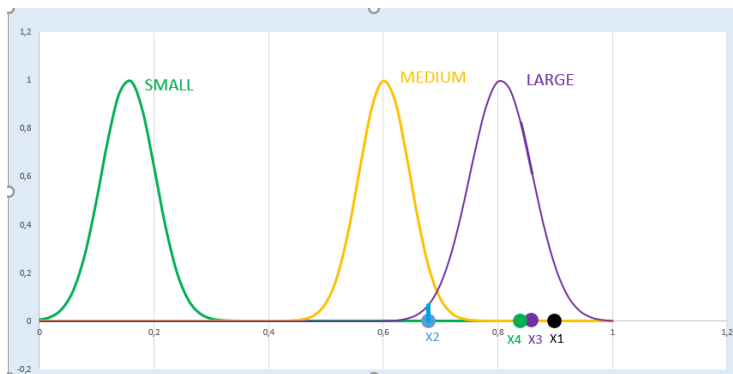
IF X1=	medium	AND X2=	large	AND X3=	small	AND X4=	small	THEN	Setosa
	Large		large		small		small		Versicola
	large		medium		medium		medium		Virginea
	medium		medium		medium		medium		Other
	large		large		large		large		
	large		medium		large		large		
	small		medium		small		small		

We would calculate here M and Y for values from column C

Iris C: X1 = 0.90, x2 = 0.68, x3 = 0.86, x4 = 0.84

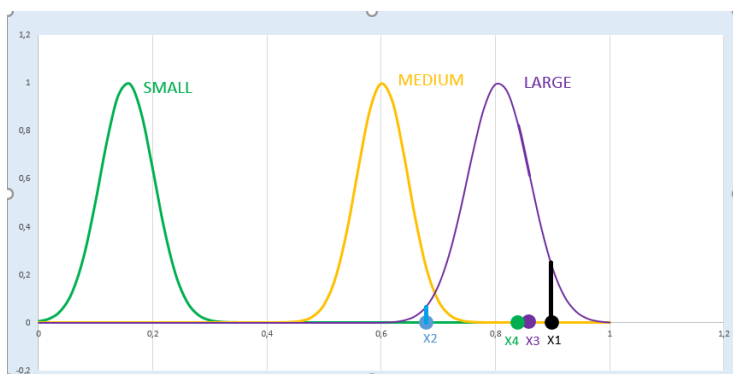
If x1=medium and x2=large and x3=small and x4=small then A

$$M_1 = 2.548883455208207e^{-10} * 0.18799762333934 * 8.61159790931117e^{-46} * 2.9037999614074686e^{-43} = 1.1982647290863262e^{-98}$$



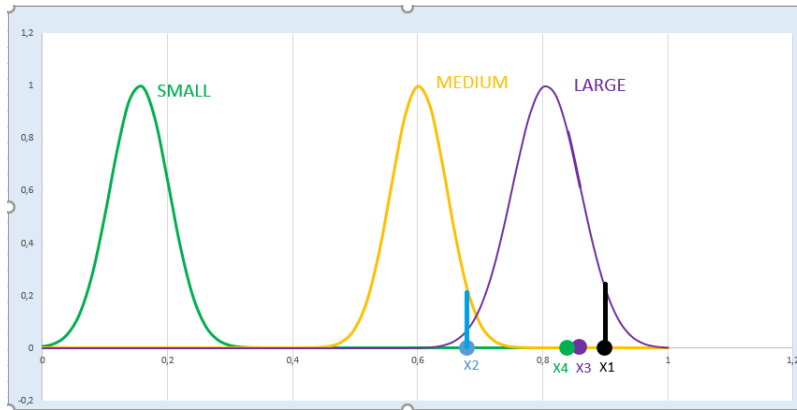
If x1=large and x2=large and x3=small and x4=small then A

$$M_2 = 0.20931979915217355 * 0.18799762333934 * 8.61159790931117e^{-46} * 2.9037999614074686e^{-43} = 9.840408038703167e^{-90}$$



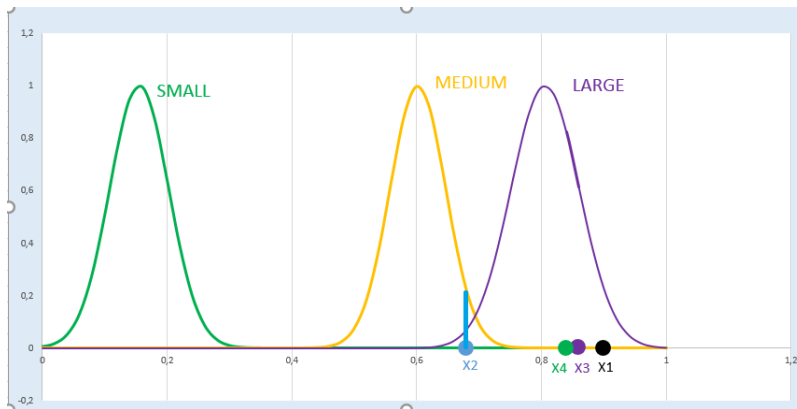
If x_1 =large and x_2 =medium and x_3 =medium and x_4 =medium then B

$$M_3 = 0.20931979915217355 * 0.12314767175686632 * 4.6650800889117205e^{-8} \\ * 4.854926256741348e^{-7} = 5.838190426394583e^{-16}$$



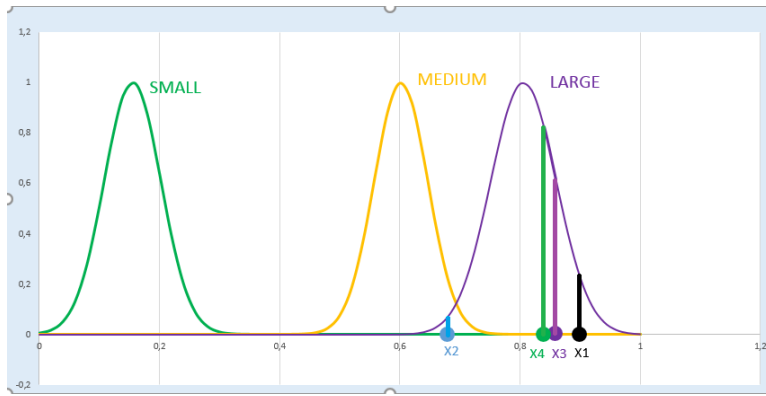
If x_1 =medium and x_2 =medium and x_3 =medium and x_4 =medium then B

$$M_4 = 2.548883455208207e^{-10} * 0.12314767175686632 * 4.6650800889117205e^{-8} \\ * 4.854926256741348e^{-7} = 7.109154053493928e^{-25}$$



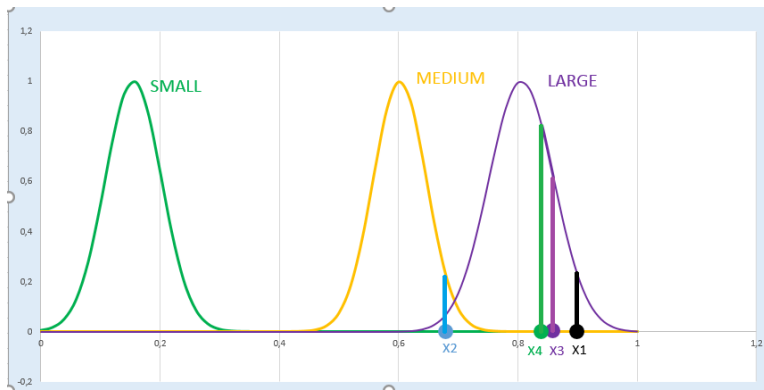
If x_1 =large and x_2 =large and x_3 =large and x_4 =large then C

$$M_5 = 0.20931979915217355 * 0.18799762333934 * 0.5373279171231892 \\ * 0.7333341218917013 = 0.015506149489567154$$



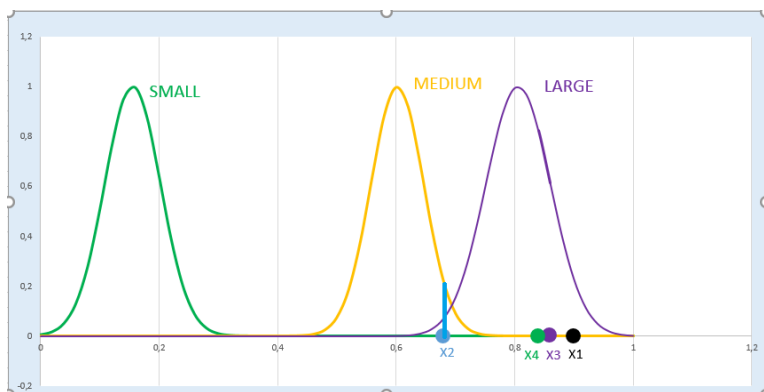
If x_1 =large and x_2 =medium and x_3 =large and x_4 =large then C

$$M_6 = 0.20931979915217355 * 0.12314767175686632 * 0.5373279171231892 \\ * 0.7333341218917013 = 0.010157289085018601$$



If x_1 =small and x_2 =medium and x_3 =small and x_4 =small then D

$$M_7 = 4.5754618287346066e^{-51} * 0.12314767175686632 * 8.61159790931117e^{-46} \\ * 0.7333341218917013 = 3.5583345604061947e^{-97}$$



Conformity table:

No	Family A	Family B	Family C
Row #1	A	B	C
Row #2	A	B	C
Row #3	A	B	C
Row #4	A	B	C
Row #5	A	B	C
Row #6	A	B	C
Row #7	A	B	B
Row #8	A	B	C
Success rate	100%	100%	87,50%