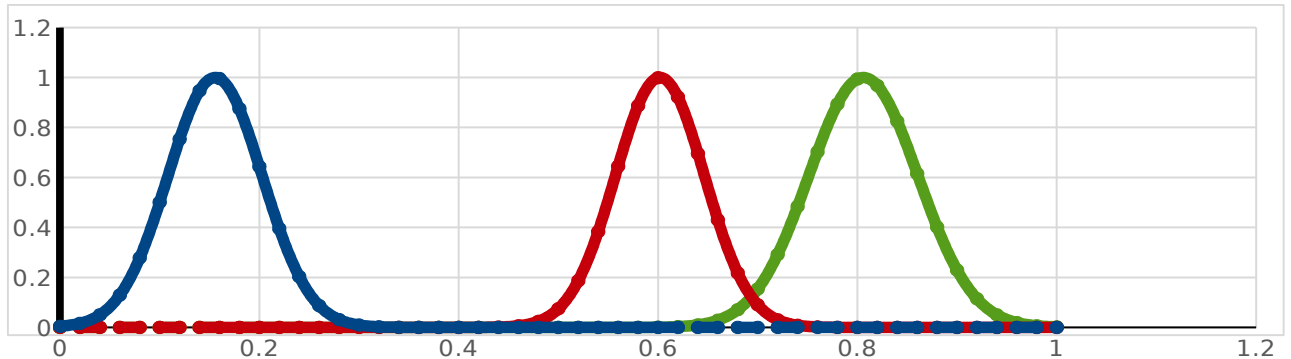


Lab 6 - Iris Flower classification

Here is the graph that is used for classification of flowers sepal-length, sepal-width, petal-length, and petal-width attributes.



Using this Iris Database we figured out set of 3 rules, one for each of 3 flowers.

Setosa				Versicolor				Virginica			
x_1	x_2	x_3	x_4	x_1	x_2	x_3	x_4	x_1	x_2	x_3	x_4
0.65	0.80	0.20	0.08	0.89	0.73	0.68	0.56	0.80	0.75	0.87	1.00
0.62	0.68	0.20	0.08	0.81	0.73	0.65	0.60	0.73	0.61	0.74	0.76
0.59	0.73	0.19	0.08	0.87	0.70	0.71	0.60	0.90	0.68	0.86	0.84
0.58	0.70	0.22	0.08	0.70	0.52	0.58	0.52	0.80	0.66	0.81	0.72
0.63	0.82	0.20	0.08	0.82	0.64	0.67	0.60	0.82	0.68	0.84	0.88
0.68	0.89	0.25	0.16	0.72	0.64	0.65	0.52	0.96	0.68	0.96	0.84
0.58	0.77	0.20	0.12	0.80	0.75	0.68	0.64	0.62	0.57	0.65	0.68
0.63	0.77	0.22	0.08	0.62	0.55	0.48	0.40	0.92	0.66	0.91	0.72

Rules:

- 1) if x_1 is MEDIUM & x_2 is MEDIUM & x_3 is SMALL & x_4 is SMALL then flower is A (Setosa)
- 2) if x_1 is LARGE & x_2 is MEDIUM & x_3 is MEDIUM & x_4 is MEDIUM then flower is B (Versicolor)
- 3) if x_1 is LARGE & x_2 is MEDIUM & x_3 is LARGE & x_4 is LARGE then flower is C (Virginica)

Finally we try to classify each of 3 flowers using the database and rules. And we get the following result:

	Family A	Family B	Family C	
	Rule-1	Rule-2	Rule-3	
#1	other	B	C	not good
#2	A	B	C	good
#3	A	B	C	good
#4	A	B	C	good
#5	other	B	C	not good
#6	other	B	C	not good
#7	A	B	B	not good
#8	A	other	C	not good
success rate	62.5%	87.5%	87.5%	37.5%