

Probability Graph

I assume 3 Classes, 3 samples for each class
class 1 has 3 samples, sample 1 and 3 are robust ,sample 2 is non robust
class 2 has 3 samples , all samples are robust
class3 has 3 smaples , all samples are non robust

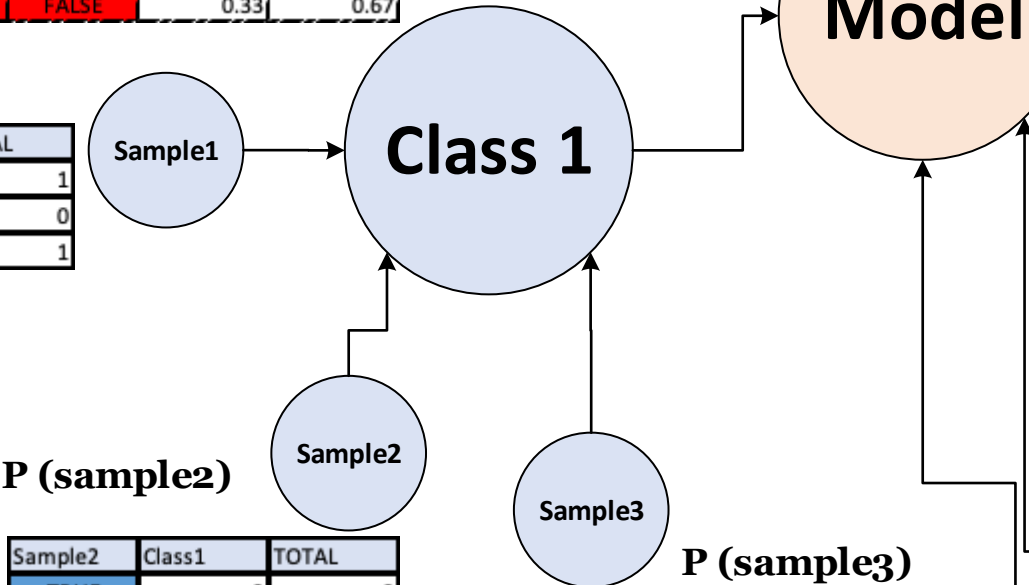
Note: each class is conditionally dependent on 3 samples , each sample has 2 possibilities so the total number of class possibilities would be 2^3 =8 and neagation of each class =1-p(class)

P (Classs1| sample1,2,3)

Sample1	Sample2	Sample3	Class1	~Class1
TRUE	TRUE	TRUE	0.67	0.33
TRUE	TRUE	FALSE	0.33	0.67
TRUE	FALSE	TRUE	0.33	0.67
TRUE	FALSE	FALSE	0.67	0.33
FALSE	TRUE	TRUE	0.33	0.67
FALSE	TRUE	FALSE	0	1
FALSE	FALSE	TRUE	0.67	0.33
FALSE	FALSE	FALSE	0.33	0.67

P (sample1)

Sample1	Class1	TOTAL
TRUE	1	1
FALSE	0	0
Total	1	1



Class1	TRUE	FALSE	total
Sample1	1	0	1
Sample2	0	1	1
Sample3	1	0	1
	2	1	3

Class1	TRUE	FALSE	total
Sample1	0.33	0	0.33
Sample2	0	0.33	0.33
Sample3	0.33	0	0.33
	0.67	0.33	1

Class2	TRUE	FALSE	total
Sample1	1	0	1
Sample2	1	0	1
Sample3	1	0	1
	3	0	3

Class2	TRUE	FALSE	total
Sample1	0.33	0	0.33
Sample2	0.33	0	0.33
Sample3	0.33	0	0.33
	0.99	0	1

P (Classs2 | sample1,2,3)

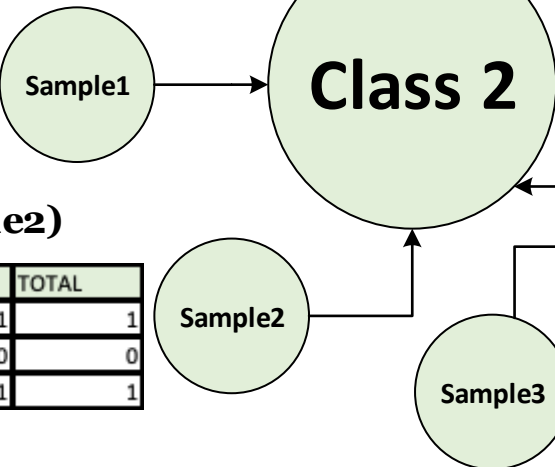
Sample1	Sample2	Sample3	Class2	~Class2
TRUE	TRUE	TRUE	1	0
TRUE	TRUE	FALSE	0.67	0.33
TRUE	FALSE	TRUE	0.67	0.33
TRUE	FALSE	FALSE	0.33	0.67
FALSE	TRUE	TRUE	0.67	0.33
FALSE	TRUE	FALSE	0.33	0.67
FALSE	FALSE	TRUE	0.33	0.67
FALSE	FALSE	FALSE	0	1

P (sample1)

Sample1	Class2	TOTAL
TRUE	1	1
FALSE	0	0
Total	1	1

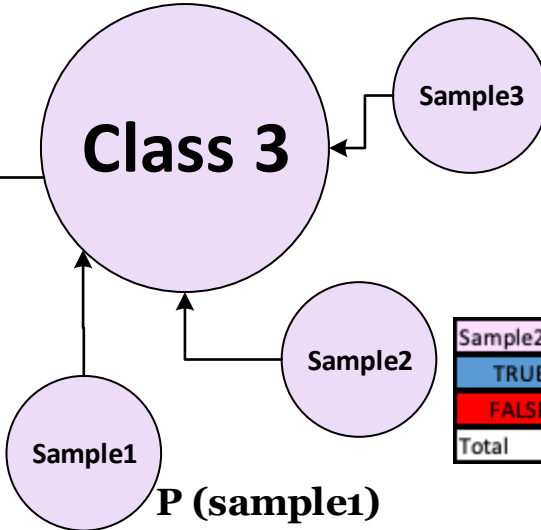
P (sample2)

Sample2	Class2	TOTAL
TRUE	1	1
FALSE	0	0
Total	1	1



P (Classs3 | sample1,2,3)

Sample1	Sample2	Sample3	Class3	~Class3
TRUE	TRUE	TRUE	0	1
TRUE	TRUE	FALSE	0.33	0.67
TRUE	FALSE	TRUE	0.33	0.67
TRUE	FALSE	FALSE	0.67	0.33
FALSE	TRUE	TRUE	0.33	0.67
FALSE	TRUE	FALSE	0.67	0.33
FALSE	FALSE	TRUE	0.67	0.33
FALSE	FALSE	FALSE	1	0



P (sample1)

Sample1	Class3	TOTAL
TRUE	0	0
FALSE	1	1
Total	1	1

P (sample3)

Sample3	Class2	TOTAL
TRUE	1	1
FALSE	0	0
Total	1	1

Model	Class1	Class2	Class3	total
TRUE	2	3	0	5
FALSE	1	0	3	4
total	3	3	3	9

Model	TRUE	FALSE	total
Class1	0.67	0.33	1
Class2	1	0	1
Calss3	0	1	1
total	1.67	1.33	3

P (sample3)

Sample3	Class3	TOTAL
TRUE	0	0
FALSE	1	1
Total	1	1

P (sample2)

Sample2	Class3	TOTAL
TRUE	0	0
FALSE	0	1
Total	1	1

Class3	TRUE	FALSE	Total
Sample1	0	1	1
Sample2	0	1	1
Sample3	0	1	1
total	0	3	3

Class3	TRUE	FALSE	Total
Sample1	0	0.33	0.33
Sample2	0	0.33	0.33
Sample3	0	0.33	0.33
	0	0.99	1