

Contemporary Data Processing Technology(CCOD)

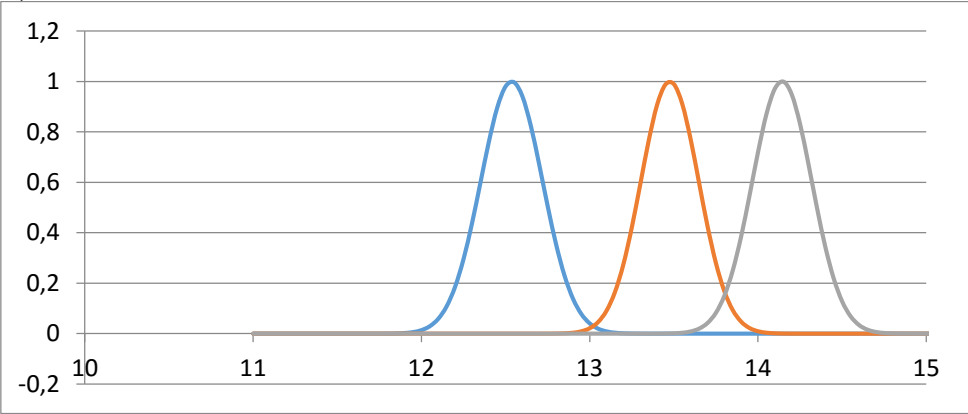
Task 8

(October 22, 2016) Timohin Valentine, AS-36

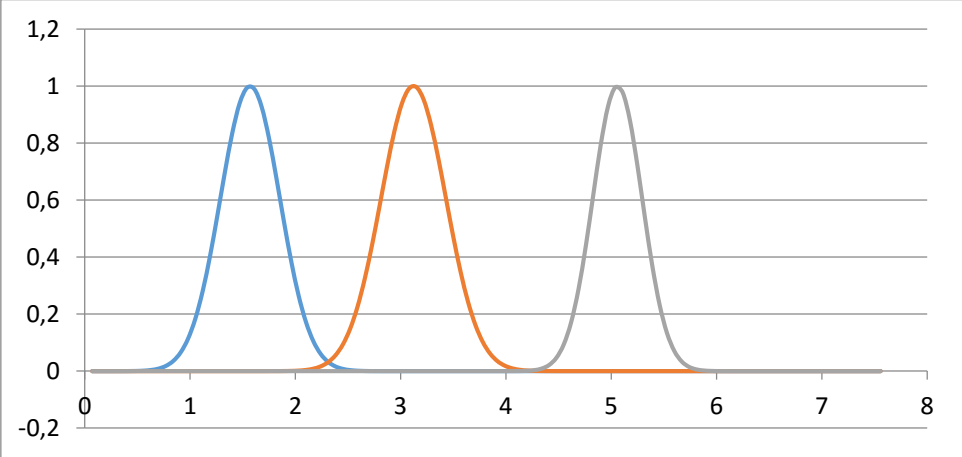
Membership Function (Gaussian)

Attributes:

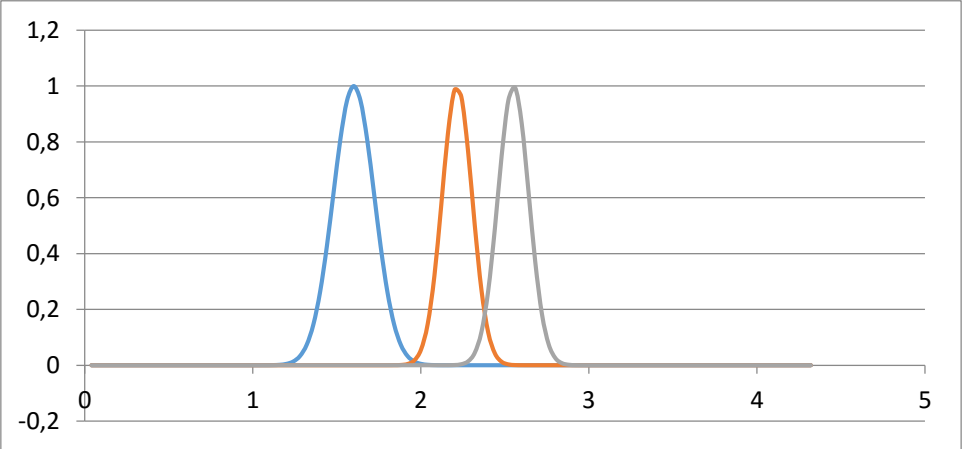
1) Alcohol



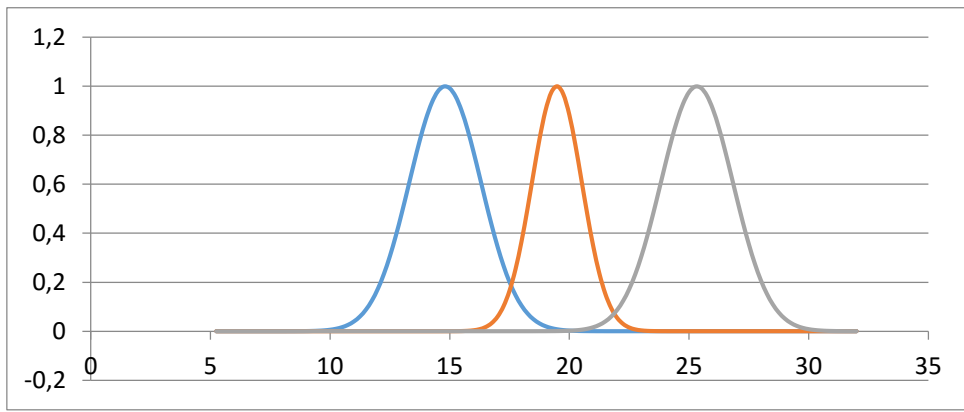
2) Malic acid



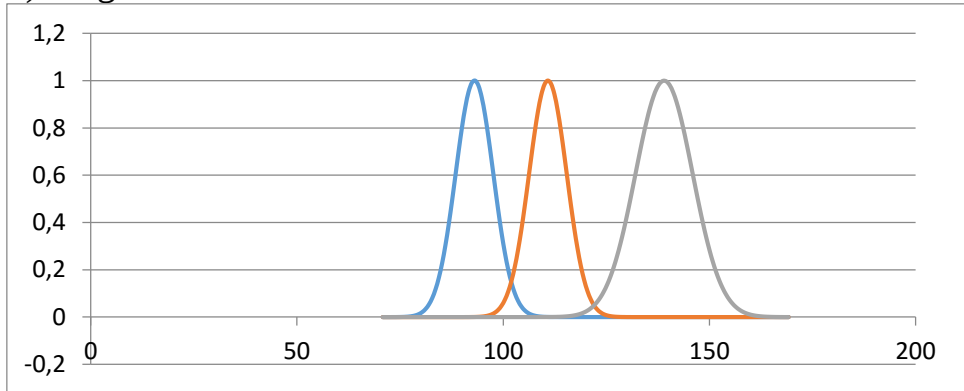
3) Ash



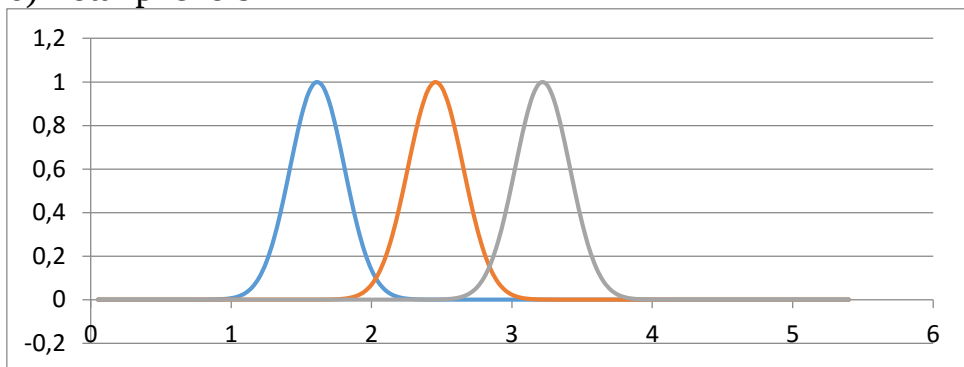
4) Alcalinity of ash



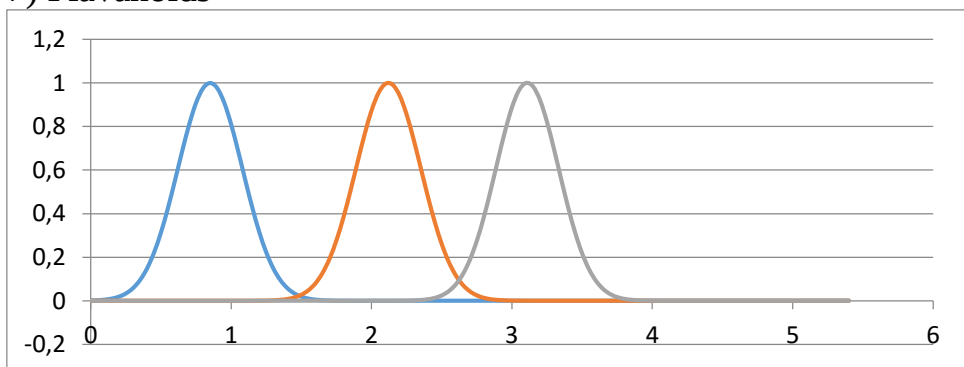
5) Magnesium



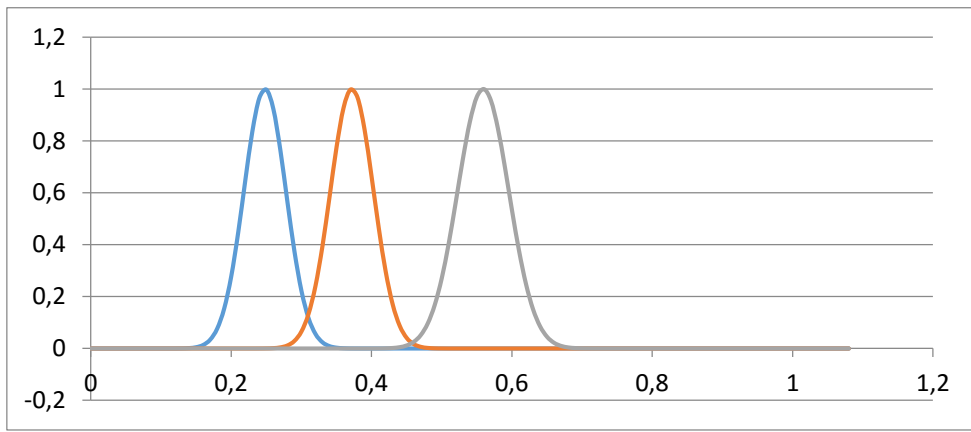
6) Total phenols



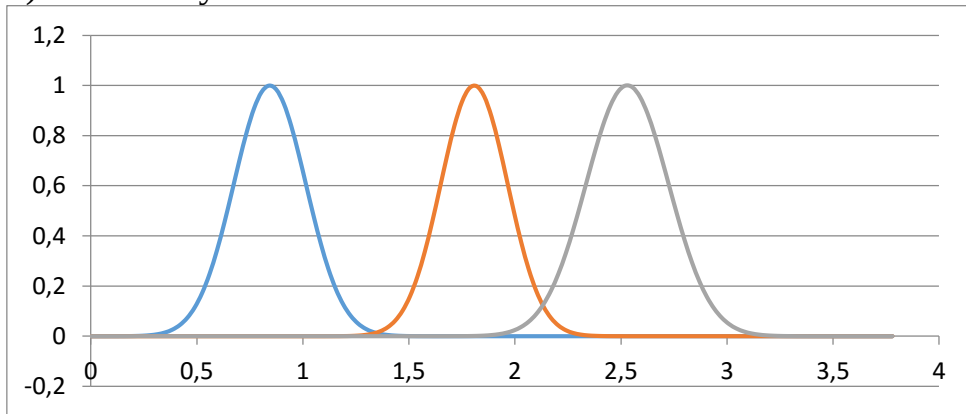
7) Flavanoids



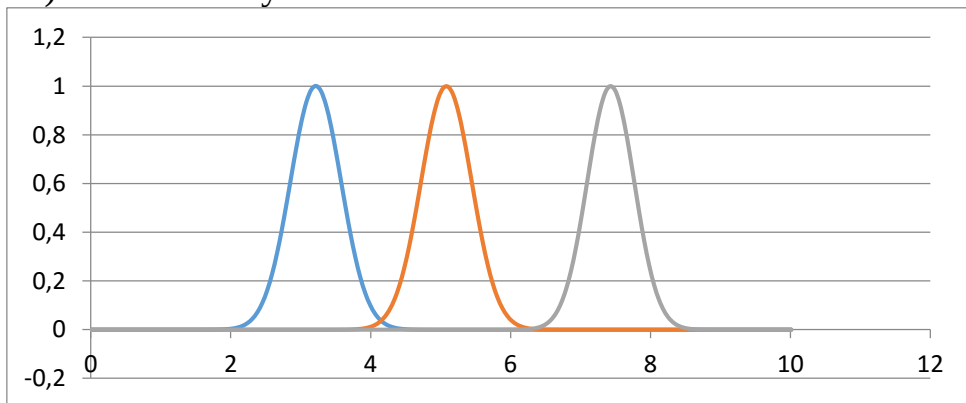
8) Nonflavanoid phenols



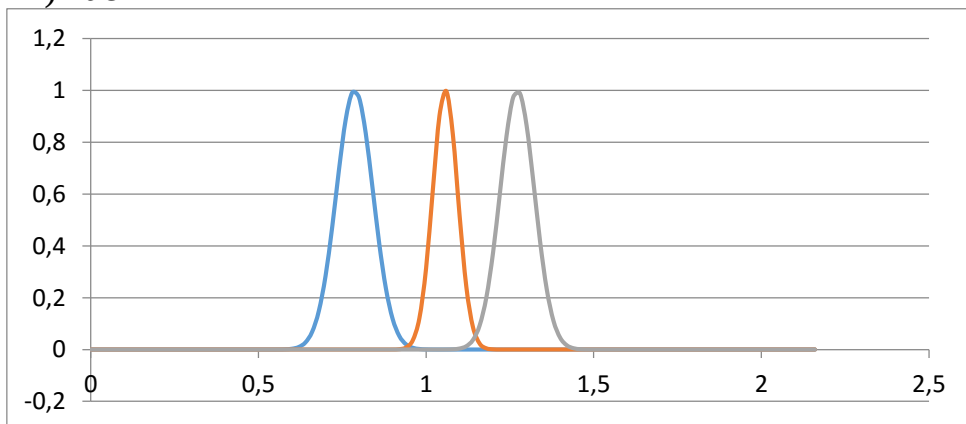
9) Proanthocyanins



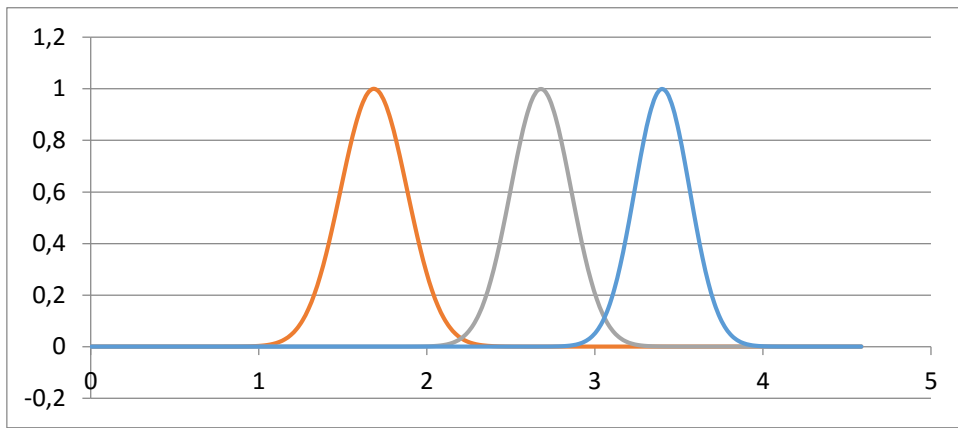
10) Color intensity



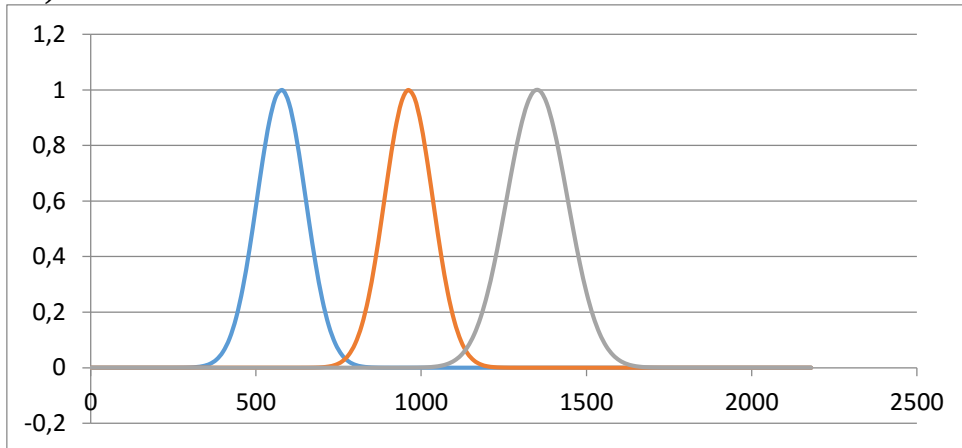
11) Hue



12) OD280/OD315 of diluted wine



13)Proline



Rules for each family:

Rule 1: If x_1 =large; x_2 =medium; x_3 =medium; x_4 =small, x_5 =medium, x_6 =medium, x_7 =large, x_8 =small, x_9 =large, x_{10} =medium, x_{11} =medium, x_{12} =medium, x_{13} =large,

then Family **A**.

Rule 2: If x_1 =small; x_2 =small; x_3 =medium; x_4 =medium, x_5 =medium, x_6 =medium,

x_7 =medium, x_8 =medium, x_9 =small, x_{10} =small, x_{11} =medium, x_{12} =medium, x_{13} =small, then Family **B**.

Rule 3: If x_1 =small; x_2 =medium; x_3 =medium; x_4 =medium, x_5 =small, x_6 =small, x_7 =small, x_8 =medium, x_9 =small, x_{10} =medium, x_{11} =small, x_{12} =small, x_{13} =small, then Family **C**.

Evaluate rules:

Data	Class 1	Class 2	Class 3	Result
1	1	2	3	Good
2	1	2	3	Good
3	1	2	3	Good
4	1	2	3	Good
5	1	2	3	Good
6	1	2	3	Good
7	2	2	3	Not Good
8	2	2	3	Not Good
9	2	2	3	Not Good
10	2	3	3	Not Good
11	2	2	3	Not Good
12	2	2	3	Not Good
13	2	2	3	Not Good
14	2	2	3	Not Good
15	1	2	3	Good
16	1	2	3	Good
17	1	2	3	Good
18	2	2	3	Not Good
19	2	3	3	Not Good
20	2	2	3	Not Good
21	1	2	3	Good
22	2	2	3	Not Good
23	2	2	3	Not Good
24	2	2	3	Not Good
25	1	2	3	Good
26	1	2	3	Good
27	2	2	3	Not Good
28	1	2	3	Good
29	2	2	3	Not Good
30	2	2	3	Not Good
31	1	2	3	Good
32	1	2	3	Good
33	1	2	3	Good
34	1	3		Not Good
35	1	2		Good
36	1	2		Good
37	1	2		Good
38	1	2		Good
39	1	2		Good
40	1	2		Good
41	1	2		Good
42	1	2		Good
43	1	2		Good
44	1	2		Good
45		3		Not Good
46		2		Good
47		2		Good
48		2		Good
49		2		Good
50		3		Not Good
51		2		Good
52		2		Good
53		2		Good
54		2		Good

55		2		Good
56		3		Not Good
Success Rate:	61%	89%	100%	63%