August
Sunday
7

2022 ٢٠٢٢

٩ محـــرم ١٤٤٤هـ ١ مســـرى ١٧٣٨ ق

٧

* Week 32 *

label 0

1	2	3
2	3	4
3	4	5
4		

1.5
2.5
3.5
4.5

1	2	3
2	3	4
3	4	5
4		

label 1

4	5	6
5	6	7
6	7	8
7		

4.5
5.5
6.5
7.5

4	5	6
5	6	7
6	7	8
7		

label 2

7	8	9
8	9	10
9	10	11
10		

7.5
8.5
9.5
10.5

7	8	9
8	9	10
9	10	11
10		

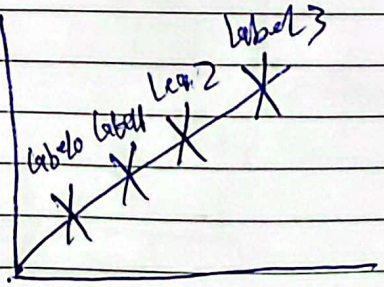
label 3

10	11	12
11	12	13
12	13	14
13	14	15
		16

11.33
12.33
13.33
14.33

10	11	12
11	12	13
12	13	14
13	14	15
		16

F2



August	S	S	M	T	W	T	F	S	S	M	T	W	T	F
			1	2	3	4	5	6	7	8	9	10	11	12
	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	27	28	29	30	31									

August Saturday 6

2022 ٢٠٢٢

أغسطس السبت ٦

٨ محـــرم ١٤٤٤هـ ٣٠ أبيـــب ١٧٣٨ ق

* Week 32 *

(218 - 147)

Retained = 100 - 0 = 100%

$OR = \frac{2.16}{2.16 + 2x0} = 100\%$

$\begin{bmatrix} 6 \\ 7 \\ 8 \\ 9 \end{bmatrix}$ $\begin{bmatrix} 7 \\ 8 \\ 9 \\ 10 \end{bmatrix}$

$\begin{pmatrix} 5 \\ 6 \\ 7 \\ 8 \end{pmatrix}$ $\begin{pmatrix} 1 \\ 2 \\ 3 \\ 4 \end{pmatrix}$ $\begin{pmatrix} 2 \\ 3 \\ 4 \\ 5 \end{pmatrix}$ $\begin{pmatrix} 4 \\ 5 \\ 6 \\ 7 \end{pmatrix}$

$\begin{pmatrix} 8 \\ 9 \\ 10 \\ 11 \end{pmatrix}$ $\begin{pmatrix} 7 \\ 8 \\ 9 \\ 10 \end{pmatrix}$ $\begin{pmatrix} 10 \\ 11 \\ 12 \\ 13 \end{pmatrix}$ $\begin{pmatrix} 11 \\ 12 \\ 13 \\ 14 \end{pmatrix}$

$\begin{pmatrix} 3 \\ 4 \\ 5 \\ 6 \end{pmatrix}$

mean $\begin{bmatrix} 6.78 \\ 7.78 \\ 8.78 \\ 9.78 \end{bmatrix}$ $\begin{bmatrix} 9.8 \\ 10.8 \\ 11.8 \\ 12.8 \end{bmatrix}$

Labels $\begin{bmatrix} 2 \\ 3 \\ 4 \\ 5 \end{bmatrix}$ $\begin{bmatrix} 4 \\ 7 \\ 6 \\ 7 \end{bmatrix}$

Label 2 $\begin{pmatrix} 9 \\ 10 \\ 11 \\ 12 \end{pmatrix}$

Label 3 $\begin{pmatrix} 10 \\ 11 \\ 12 \\ 13 \end{pmatrix}$

السبت	الاحد	الاثنين	الثلاثاء	الاربعاء	الخميس	الجمعه	السبت	الاحد	الاثنين	الثلاثاء	الاربعاء	الخميس	الجمعه
		١	٢	٣	٤	٥	٦	٧	٨	٩	١٠	١١	١٢

$$\begin{bmatrix} 2.16 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix} \qquad v_1 = \begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix}$$

length = 1

eigenvectors are Normalized

$$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix} = M = M^T$$

$y = M^T 6 = [2.2, 1, 2, -0.8, -0.8, 1.0]$

Eigen Vector are Normalized

y is zero mean

Cov y is equivalent to diagonal Matrix (1-D) because it is one-dimension

Lost INFO $\% = \frac{0+0}{0+0+2.16} = 0$

$$\text{Mean} = \begin{bmatrix} 5+4+2+2+1 \\ 0+0+0+0+0 \\ 0+0+0+0+0 \end{bmatrix} = \begin{bmatrix} 14 \\ 0 \\ 0 \end{bmatrix}$$

$$\frac{1}{5}\begin{bmatrix} 14 \\ 0 \\ 0 \end{bmatrix} = \begin{bmatrix} 2.8 \\ 0 \\ 0 \end{bmatrix}$$

$$\text{zero-mean} = \begin{bmatrix} 2.2 & 1.2 & -0.8 & -1.8 \\ 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \end{bmatrix}$$

$$\frac{1}{N} \delta \delta^T = \text{cov matrix}$$

$$= \begin{bmatrix} 2.16 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$$

Eigen Value are The diagonal

$\lambda = 2.16, 0, 0$

$x_2, x_3 \rightarrow$ are Free variables

$$x_2 \begin{bmatrix} 0 \\ 1 \\ 0 \end{bmatrix} + x_3 \begin{bmatrix} 0 \\ 0 \\ 1 \end{bmatrix}$$