
```
V = [28 31 130.0 68.12;24 28 143.0 127.89; 28 20 136.0 89.03;32 34
130.5 78.28;22 15 125.0 134.08;26 37 147.5 135.31;24 19 135.0 130.48;
28 22 125.0 86.48;24 26 127.0 129.47;30 21 139.0 82.43;22 20 121.5
127.41;30 38 150.5 71.21;24 17 120.0 132.06; 26 20 125.0 90.85]
```

```
V_mean = mean(V)
```

```
V_covariance = cov(V)
```

```
x1 = [30 20 133 189.6]
x2 = [22 30 100.06 126.0075]
x3 = [28.47 20.11 133.06 188.90]
```

```
dist1 = sqrt((x1-V_mean)*inv(V_covariance)*transpose(x1-V_mean))
dist2 = sqrt((x2-V_mean)*inv(V_covariance)*transpose(x2-V_mean))
dist3 = sqrt((x3-V_mean)*inv(V_covariance)*transpose(x3-V_mean))
```

```
dist = [dist1; dist2; dist3]
```

```
[minimum1,index1] = min(dist)
```

```
fprintf('Minimum is %f, point is %d',minimum1, index1)
```

```
V =
```

28.0000	31.0000	130.0000	68.1200
24.0000	28.0000	143.0000	127.8900
28.0000	20.0000	136.0000	89.0300
32.0000	34.0000	130.5000	78.2800
22.0000	15.0000	125.0000	134.0800
26.0000	37.0000	147.5000	135.3100
24.0000	19.0000	135.0000	130.4800
28.0000	22.0000	125.0000	86.4800
24.0000	26.0000	127.0000	129.4700
30.0000	21.0000	139.0000	82.4300
22.0000	20.0000	121.5000	127.4100
30.0000	38.0000	150.5000	71.2100
24.0000	17.0000	120.0000	132.0600
26.0000	20.0000	125.0000	90.8500

```
V_mean =
```

26.2857	24.8571	132.5000	105.9357
---------	---------	----------	----------

```
V_covariance =
```

9.7582	12.8132	12.0769	-72.1541
12.8132	56.9011	49.1154	-70.6207
12.0769	49.1154	92.8077	-46.0696

```

-72.1541 -70.6207 -46.0696 714.0012

x1 =

30.0000 20.0000 133.0000 189.6000

x2 =

22.0000 30.0000 100.0600 126.0075

x3 =

28.4700 20.1100 133.0600 188.9000

dist1 =

9.4606

dist2 =

5.5390

dist3 =

8.3065

dist =

9.4606
5.5390
8.3065

minimum1 =

5.5390

index1 =

2

Minimum is 5.538994, point is 2

```

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