

Mahalanobis distances and max

Calculate the Mahalanobis distance matrix for the selected cities

```
load citiesItaly
X = citiesItaly;
dist = squareform(pdist(X{:, :}, "mahalanobis"));
sel = 10:5:50;
nomiSel = X.Properties.RowNames(sel);
D = dist(sel, sel);
load citiesitaly
X=citiesItaly;
dist=squareform(pdist(X{:, :}, "mahalanobis"));
sel=10:5:50;
nomiSel=X.Properties.RowNames(sel);
D=dist(sel, sel);
```

creation of table of Mahalanobis distances

```
Dt=array2table(D, "RowNames", nomiSel, "VariableNames", nomiSel);
disp('Mahalanobis distance matrix in table format')
```

Mahalanobis distance matrix in table format

```
disp(Dt)
```

	Imperia	Como	Pavia	Bolzano	Treviso	Gorizia	Reggio E	Forlì	Ascoli P
Imperia	0	3.9575	4.0043	4.2243	3.3369	5.0866	4.0191	3.3747	2.5757
Como	3.9575	0	3.7857	4.8715	3.2959	3.6187	2.6554	3.6948	4.0946
Pavia	4.0043	3.7857	0	4.8112	4.5481	3.5882	3.0347	3.0698	5.0051
Bolzano	4.2243	4.8715	4.8112	0	3.3819	5.7934	3.5164	1.998	4.1082
Treviso	3.3369	3.2959	4.5481	3.3819	0	3.7185	2.1703	2.7318	2.5727
Gorizia	5.0866	3.6187	3.5882	5.7934	3.7185	0	2.7644	4.3559	5.298
Reggio E	4.0191	2.6554	3.0347	3.5164	2.1703	2.7644	0	2.0361	3.6658
Forlì	3.3747	3.6948	3.0698	1.998	2.7318	4.3559	2.0361	0	3.3011
Ascoli P	2.5757	4.0946	5.0051	4.1082	2.5727	5.298	3.6658	3.3011	

```
[i,j]=find(D==max(D,[], 'all'));
disp('Furthest cities (among the selected ones)')
```

Furthest cities (among the selected ones)

```
disp(Dt(i,j))
```

	Bolzano	Gorizia
Gorizia	5.7934	0
Bolzano	0	5.7934