

The data set (and description) can be downloaded here:

<http://stat.ethz.ch/Teaching/Datasets/crabs.dat>

Description:

TITLE : crabs
KEYWORDS (statist) : discriminant analysis
APPLICATION AREA : biology, zoology, environment

SHORT DESCRIPTION :
Leptograpsus crabs
Data from Campbell & Mahon (1974) on the
morphology of
rock crabs of genus Leptograpsus. There are 50
specimens
of each sex of each of two colour forms.
Variables are:
- colour form (B = blue form, O = orange form);
- sex (M = male, F = female);
- index within each group of 50;
- frontal lip of carapace, in mm;
- rear width of carapace, in mm;
- length along the midline of carapace, in mm;
- maximum width of carapace, in mm;
- body depth, in mm.

DIM. (VAR./OBS.) : 5 / 200

/ LITERATURE : /

Ripley (1996): Pattern Recognition and Neural
Networks.

Descriptive statistics:

Dataset= crab_BvSO : n= 200 , d= 5

Class1: n= 100

Covariance matrix:

	[,1]	[,2]	[,3]	[,4]	[,5]
[1,]	9.1180	6.1795	20.7416	23.6424	9.1584
[2,]	6.1795	5.1952	14.1030	16.2109	6.3228
[3,]	20.7416	14.1030	47.6473	54.2205	21.0049
[4,]	23.6424	16.2109	54.2205	61.8746	23.9526
[5,]	9.1584	6.3228	21.0049	23.9526	9.4119

Correlation matrix:

	[,1]	[,2]	[,3]	[,4]	[,5]
[1,]	1.0000	0.8979	0.9951	0.9954	0.9886
[2,]	0.8979	1.0000	0.8964	0.9042	0.9042
[3,]	0.9951	0.8964	1.0000	0.9986	0.9919
[4,]	0.9954	0.9042	0.9986	1.0000	0.9926
[5,]	0.9886	0.9042	0.9919	0.9926	1.0000

Median: 14.2256 12.1822 30.2594 34.9459 12.6491
 Mean: 14.056 11.928 30.058 34.717 12.583
 MCD-estimated:
 MDC-0.975-Mean: 13.4902 11.4549 28.7098 33.161 11.989
 MDC-0.750-Mean: 13.32 11.3813 28.2938 32.6938 11.8025
 MDC-0.500-Mean: 13.3687 11.394 28.4434 32.853 11.8506

Class2: n= 100

Covariance matrix:

	[,1]	[,2]	[,3]	[,4]	[,5]
[1,]	10.7294	7.7187	21.9016	24.4909	10.1408
[2,]	7.7187	6.7888	15.4190	17.6731	7.0596
[3,]	21.9016	15.4190	45.7552	50.8440	21.1926
[4,]	24.4909	17.6731	50.8440	56.8655	23.5308
[5,]	10.1408	7.0596	21.1926	23.5308	9.9318

Correlation matrix:

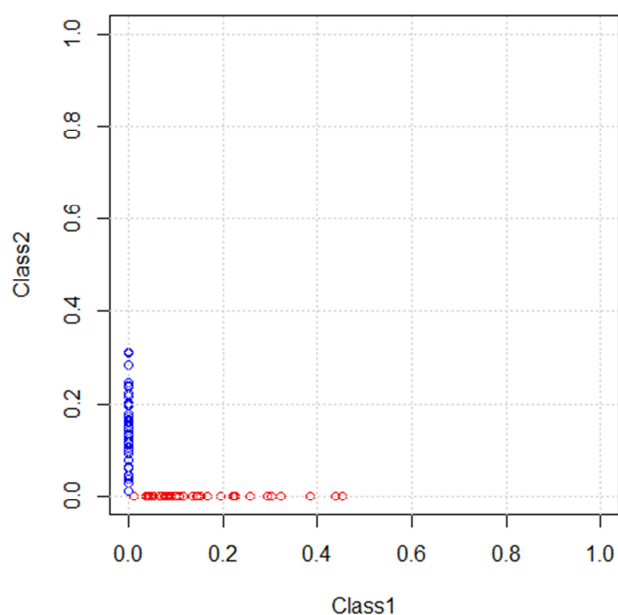
	[,1]	[,2]	[,3]	[,4]	[,5]
[1,]	1.0000	0.9044	0.9885	0.9915	0.9824
[2,]	0.9044	1.0000	0.8749	0.8995	0.8597
[3,]	0.9885	0.8749	1.0000	0.9968	0.9941
[4,]	0.9915	0.8995	0.9968	1.0000	0.9901
[5,]	0.9824	0.8597	0.9941	0.9901	1.0000

Median: 17.4353 13.8267 34.5164 38.6957 15.631
 Mean: 17.11 13.549 34.153 38.112 15.478
 MCD-estimated:
 MDC-0.975-Mean: 16.5826 13.014 33.2174 37.0488 15.0407
 MDC-0.750-Mean: 16.5718 13.0259 33.2035 37.0459 15.0376
 MDC-0.500-Mean: 16.5826 13.014 33.2174 37.0488 15.0407

Measures:

Mah.Dist: 5.2224
 Mah.Dist-MCD-0.975: 5.026
 Mah.Dist-MCD-0.750: 5.0147
 Mah.Dist-MCD-0.500: 5.0349

DD-Plot (zonoid): crab_BvsO



DD-Plot (random Tukey) for crab_BvsO

