

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

<http://archive.ics.uci.edu/ml/machine-learning-databases/00212/>

Description:

@relation column_2C_weka

@attribute pelvic_incidence numeric

@attribute pelvic_tilt numeric

@attribute lumbar_lordosis_angle numeric

@attribute sacral_slope numeric

@attribute pelvic_radius numeric

@attribute degree_spondylolisthesis numeric

@attribute class {Abnormal, Normal}

Citation Request:

Please refer to the repository <http://archive.ics.uci.edu/ml> (see citation policy).

See also Frank, A. & Asuncion, A. (2010). UCI Machine Learning Repository

[<http://archive.ics.uci.edu/ml>].

Irvine, CA: University of California, School of Information and Computer Science.

Descriptive statistics:

Dataset= vertebral-column : n= 310 , d= 6

Class1: n= 210

Covariance matrix:

	[,1]	[,2]	[,3]	[,4]	[,5]	[,6]
[1,]	311.9394	105.9087	236.1581	206.0250	-20.9393	453.9016
[2,]	105.9087	110.5790	78.8221	-4.6700	36.3767	137.0192
[3,]	236.1581	78.8221	386.8685	157.3297	19.0751	397.3477
[4,]	206.0250	-4.6700	157.3297	210.6891	-57.3146	316.8820
[5,]	-20.9393	36.3767	19.0751	-57.3146	198.5553	83.9594
[6,]	453.9016	137.0192	397.3477	316.8820	83.9594	1656.2245

Correlation matrix:

	[,1]	[,2]	[,3]	[,4]	[,5]	[,6]
[1,]	1.0000	0.5702	0.6798	0.8036	-0.0841	0.6315
[2,]	0.5702	1.0000	0.3811	-0.0306	0.2455	0.3202
[3,]	0.6798	0.3811	1.0000	0.5511	0.0688	0.4964
[4,]	0.8036	-0.0306	0.5511	1.0000	-0.2802	0.5364
[5,]	-0.0841	0.2455	0.0688	-0.2802	1.0000	0.1464
[6,]	0.6315	0.3202	0.4964	0.5364	0.1464	1.0000

Median: 64.3361 17.9956 55.6033 46.341 113.3116 32.9088

Mean: 64.6921 19.791 55.9252 44.9015 115.0774 37.7776

MCD-estimated:

MDC-0.975-Mean: 65.2391 19.8373 56.7641 45.4018 115.2113 38.441

MDC-0.750-Mean: 64.6921 19.791 55.9252 44.9015 115.0774 37.7776

MDC-0.500-Mean: 65.2391 19.8373 56.7641 45.4018 115.2113 38.441

Class2: n= 100

Covariance matrix:

	[,1]	[,2]	[,3]	[,4]	[,5]	[,6]
[1,]	152.9650	53.1515	107.1944	99.8139	-54.6642	15.6189
[2,]	53.1515	45.9502	25.3629	7.1993	-21.1770	7.7775
[3,]	107.1944	25.3629	152.8087	81.8374	-27.5706	20.3356
[4,]	99.8139	7.1993	81.8374	92.6171	-33.4884	7.8483
[5,]	-54.6642	-21.1770	-27.5706	-33.4884	81.2478	-3.3084
[6,]	15.6189	7.7775	20.3356	7.8483	-3.3084	39.7785

Correlation matrix:

	[,1]	[,2]	[,3]	[,4]	[,5]	[,6]
[1,]	1.0000	0.6340	0.7011	0.8386	-0.4903	0.2002
[2,]	0.6340	1.0000	0.3027	0.1104	-0.3466	0.1819
[3,]	0.7011	0.3027	1.0000	0.6879	-0.2474	0.2608
[4,]	0.8386	0.1104	0.6879	1.0000	-0.3860	0.1293
[5,]	-0.4903	-0.3466	-0.2474	-0.3860	1.0000	-0.0582
[6,]	0.2002	0.1819	0.2608	0.1293	-0.0582	1.0000

Median: 50.2138 12.3951 41.9529 37.819 124.0508 1.7519

Mean: 51.6856 12.8218 43.5423 38.8638 123.8912 2.187

MCD-estimated:

MDC-0.975-Mean: 50.5903 12.7383 42.1598 37.852 124.8966 1.3558

MDC-0.750-Mean: 51.6856 12.8218 43.5423 38.8638 123.8912 2.187

MDC-0.500-Mean: 50.5903 12.7383 42.1598 37.852 124.8966 1.3558

Measures:

Mah.Dist: 1.5358

Mah.Dist-MCD-0.975: 1.1055

Mah.Dist-MCD-0.750: 1.1055

Mah.Dist-MCD-0.500: 1.1609

All the MCD estimates have been obtained after a slight perturbation of the data set

