

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

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

Description:

1. Title: Teaching Assistant Evaluation
2. Sources:
 - (a) Collector: Wei-Yin Loh (Department of Statistics, UW-Madison)
 - (b) Donor: Tjen-Sien Lim (limt@stat.wisc.edu)
 - (b) Date: June 7, 1997
3. Past Usage:
 1. Loh, W.-Y. & Shih, Y.-S. (1997). Split selection Methods for Classification Trees, *Statistica Sinica* 7: 815-840.
 2. Lim, T.-S., Loh, W.-Y. & Shih, Y.-S. (1999). A Comparison of Prediction Accuracy, Complexity, and Training Time of Thirty-three Old and New Classification Algorithms. *Machine Learning*. Forthcoming.
(ftp://ftp.stat.wisc.edu/pub/loh/treeprogs/quest1.7/mach1317.pdf or (http://www.stat.wisc.edu/~limt/mach1317.pdf))
4. Relevant Information:

The data consist of evaluations of teaching performance over three regular semesters and two summer semesters of 151 teaching assistant (TA) assignments at the Statistics Department of the University of Wisconsin-Madison. The scores were divided into 3 roughly equal-sized categories ("low", "medium", and "high") to form the class variable.
5. Number of Instances: 151
6. Number of Attributes: 6 (including the class attribute)
7. Attribute Information:
 1. Whether or not the TA is a native English speaker (binary)
1=English speaker, 2=non-English speaker
 2. Course instructor (categorical, 25 categories)
 3. Course (categorical, 26 categories)
 4. Summer or regular semester (binary) 1=Summer, 2=Regular
 5. Class size (numerical)
 6. Class attribute (categorical) 1=Low, 2=Medium, 3=High
8. Missing Attribute values: None

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= tae : n= 151 , d= 5

Class1: n= 29

Covariance matrix:

	[,1]	[,2]	[,3]	[,4]	[,5]
[1,]	39.1946	-6.9532	-0.7771	14.1626	0.4002
[2,]	-6.9532	34.1478	1.0197	-4.4039	-1.1872
[3,]	-0.7771	1.0197	0.2217	2.9557	0.0012
[4,]	14.1626	-4.4039	2.9557	192.9089	2.0998
[5,]	0.4002	-1.1872	0.0012	2.0998	0.6133

Correlation matrix:

	[,1]	[,2]	[,3]	[,4]	[,5]
[1,]	1.0000	-0.1901	-0.2636	0.1629	0.0816
[2,]	-0.1901	1.0000	0.3706	-0.0543	-0.2594
[3,]	-0.2636	0.3706	1.0000	0.4520	0.0033
[4,]	0.1629	-0.0543	0.4520	1.0000	0.1930
[5,]	0.0816	-0.2594	0.0033	0.1930	1.0000

Median:	17.1619	6.4604	1.687	29.9024	2.4378
Mean:	17.1379	6.1724	1.6897	31.8621	2.4483
MCD-estimated:					
MDC-0.975-Mean:	19.5556	3	1.5	30.3333	2.5556
MDC-0.750-Mean:	19.5556	3	1.5	30.3333	2.5556
MDC-0.500-Mean:	19.5556	3	1.5	30.3333	2.5556

Class2: n= 122

Covariance matrix:

	[,1]	[,2]	[,3]	[,4]	[,5]
[1,]	45.0633	-10.4132	-0.1706	-11.3214	-0.0156
[2,]	-10.4132	52.1486	0.3795	-0.4491	1.5426
[3,]	-0.1706	0.3795	0.1024	1.0566	-0.0839
[4,]	-11.3214	-0.4491	1.0566	156.7205	-1.4613
[5,]	-0.0156	1.5426	-0.0839	-1.4613	0.6379

Correlation matrix:

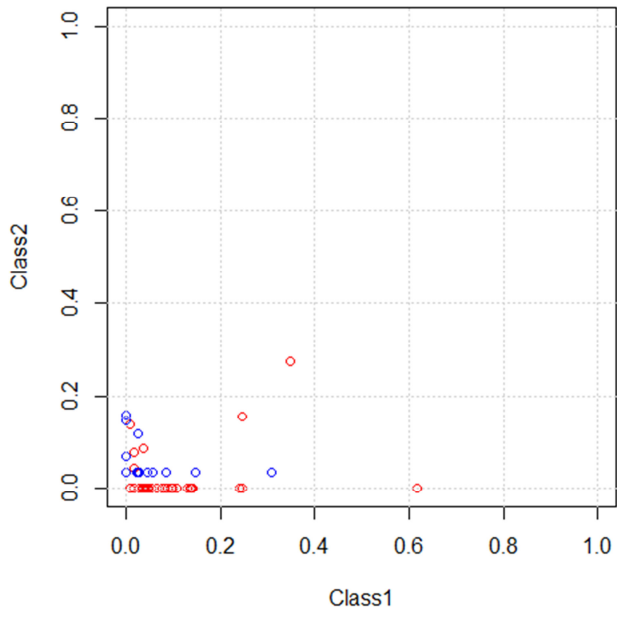
	[,1]	[,2]	[,3]	[,4]	[,5]
[1,]	1.0000	-0.2148	-0.0794	-0.1347	-0.0029
[2,]	-0.2148	1.0000	0.1642	-0.0050	0.2675
[3,]	-0.0794	0.1642	1.0000	0.2637	-0.3281
[4,]	-0.1347	-0.0050	0.2637	1.0000	-0.1462
[5,]	-0.0029	0.2675	-0.3281	-0.1462	1.0000

Median:	12.4517	7.6282	1.882	25.6576	1.9322
Mean:	12.8115	8.5656	1.8852	26.918	1.918
MCD-estimated:					
MDC-0.975-Mean:	12.6204	8.9907	2	28.1019	1.8241
MDC-0.750-Mean:	12.6204	8.9907	2	28.1019	1.8241
MDC-0.500-Mean:	12.6204	8.9907	2	28.1019	1.8241

Measures:

Mah.Dist:	1.1803
Mah.Dist-MCD-0.975:	2.0298
Mah.Dist-MCD-0.750:	2.0298
Mah.Dist-MCD-0.500:	2.0298

DD-Plot (zonoid): tae



DD-Plot (random Tukey): tae

