

# UCI



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## Machine Learning Repository

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### Housing Data Set

Download: [Data Folder](#), [Data Set Description](#)

**Abstract:** Taken from StatLib library



<b>Data Set Characteristics:</b>	Multivariate	<b>Number of Instances:</b>	506	<b>Area:</b>	N/A
<b>Attribute Characteristics:</b>	Categorical, Integer, Real	<b>Number of Attributes:</b>	14	<b>Date Donated</b>	1993-07-07
<b>Associated Tasks:</b>	Regression	<b>Missing Values?</b>	No	<b>Number of Web Hits:</b>	214901

#### Source:

Origin:

This dataset was taken from the StatLib library which is maintained at Carnegie Mellon University.

Creator:

Harrison, D. and Rubinfeld, D.L.

'Hedonic prices and the demand for clean air', J. Environ. Economics & Management, vol.5, 81-102, 1978.

#### Data Set Information:

Concerns housing values in suburbs of Boston.

#### Attribute Information:

1. CRIM: per capita crime rate by town
2. ZN: proportion of residential land zoned for lots over 25,000 sq.ft.
3. INDUS: proportion of non-retail business acres per town
4. CHAS: Charles River dummy variable (= 1 if tract bounds river; 0 otherwise)
5. NOX: nitric oxides concentration (parts per 10 million)
6. RM: average number of rooms per dwelling
7. AGE: proportion of owner-occupied units built prior to 1940
8. DIS: weighted distances to five Boston employment centres
9. RAD: index of accessibility to radial highways

10. TAX: full-value property-tax rate per \$10,000
11. PTRATIO: pupil-teacher ratio by town
12. B:  $1000(B_k - 0.63)^2$  where  $B_k$  is the proportion of blacks by town
13. LSTAT: % lower status of the population
14. MEDV: Median value of owner-occupied homes in \$1000's

## Relevant Papers:

Belsley, Kuh & Welsch, 'Regression diagnostics: Identifying Influential Data and Sources of Collinearity', Wiley, 1980. 244-261.

[\[Web Link\]](#)

Quinlan, R. (1993). Combining Instance-Based and Model-Based Learning. In Proceedings on the Tenth International Conference of Machine Learning, 236-243, University of Massachusetts, Amherst. Morgan Kaufmann.

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## Papers That Cite This Data Set<sup>1</sup>:



Manuel Oliveira. [Library Release Form Name of Author: Stanley Robson de Medeiros Oliveira Title of Thesis: Data Transformation For Privacy-Preserving Data Mining Degree: Doctor of Philosophy Year this Degree Granted](#). University of Alberta Library. 2005. [\[View Context\]](#).

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Christopher K I Williams and Carl Edward Rasmussen and Anton Schwaighofer and Volker Tresp. [Observations on the Nyström Method for Gaussian Process Prediction](#). Division of Informatics Gatsby Computational Neuroscience Unit University of Edinburgh University College London. 2002. [\[View Context\]](#).

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David Hershberger and Hillol Kargupta. [Distributed Multivariate Regression Using Wavelet-Based Collective Data Mining](#). J. Parallel Distrib. Comput, 61. 2001. [\[View Context\]](#).

Thomas Melliush and Craig Saunders and Ilia Nouretdinov and Volodya Vovk and Carol S. Saunders and I. Nouretdinov V.. [The typicalness framework: a comparison with the Bayesian approach](#). Department of Computer Science. 2001. [\[View Context\]](#).

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H. Altay Guvenir and Ilhan Uysal. [Regression on feature projections](#). a Department of Computer Engineering, Bilkent University. 1999. [\[View Context\]](#).

Ayhan Demiriz and Kristin P. Bennett and Mark J. Embrechts. [Semi-Supervised Clustering Using Genetic Algorithms](#). Dept. 1999. [\[View Context\]](#).

Rudy Setiono and Huan Liu. [A connectionist approach to generating oblique decision trees](#). IEEE Transactions on Systems, Man, and Cybernetics, Part B, 29. 1999. [\[View Context\]](#).

Jinyan Li and Xiuzhen Zhang and Guozhu Dong and Kotagiri Ramamohanarao and Qun Sun. [Efficient Mining of High Confidence Association Rules without Support Thresholds](#). PKDD. 1999. [\[View Context\]](#).

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Sreerama K. Murthy and Simon Kasif and Steven Salzberg. [A System for Induction of Oblique Decision Trees](#). Department of Computer Science Johns Hopkins University. 1994. [\[View Context\]](#).

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David R. Musicant. [DATA MINING VIA MATHEMATICAL PROGRAMMING AND MACHINE LEARNING](#). Doctor of Philosophy (Computer Sciences) UNIVERSITY. [\[View Context\]](#).

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S. Sathiya Keerthi. [Improvements to SMO Algorithm for SVM Regression](#). Author for Correspondence: Prof. [\[View Context\]](#).

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