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| |  |  | | --- | --- | | **Abalone Data Set**  *Download*: [Data Folder](http://archive.ics.uci.edu/ml/machine-learning-databases/abalone/), [Data Set Description](http://archive.ics.uci.edu/ml/machine-learning-databases/abalone/abalone.names)  **Abstract**: Predict the age of abalone from physical measurements |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Data Set Characteristics:** | Multivariate | **Number of Instances:** | 4177 | **Area:** | Life | | **Attribute Characteristics:** | Categorical, Integer, Real | **Number of Attributes:** | 8 | **Date Donated** | 1995-12-01 | | **Associated Tasks:** | Classification | **Missing Values?** | No | **Number of Web Hits:** | 205551 |   **Source:**  Data comes from an original (non-machine-learning) study:  Warwick J Nash, Tracy L Sellers, Simon R Talbot, Andrew J Cawthorn and Wes B Ford (1994)  "The Population Biology of Abalone (\_Haliotis\_ species) in Tasmania. I. Blacklip Abalone (\_H. rubra\_) from the North Coast and Islands of Bass Strait",  Sea Fisheries Division, Technical Report No. 48 (ISSN 1034-3288)  Original Owners of Database:  Marine Resources Division  Marine Research Laboratories - Taroona  Department of Primary Industry and Fisheries, Tasmania  GPO Box 619F, Hobart, Tasmania 7001, Australia  (contact: Warwick Nash +61 02 277277, wnash **'@'** dpi.tas.gov.au)  Donor of Database:  Sam Waugh (Sam.Waugh **'@'** cs.utas.edu.au)  Department of Computer Science, University of Tasmania  GPO Box 252C, Hobart, Tasmania 7001, Australia  **Data Set Information:**  Predicting the age of abalone from physical measurements. The age of abalone is determined by cutting the shell through the cone, staining it, and counting the number of rings through a microscope -- a boring and time-consuming task. Other measurements, which are easier to obtain, are used to predict the age. Further information, such as weather patterns and location (hence food availability) may be required to solve the problem.  From the original data examples with missing values were removed (the majority having the predicted value missing), and the ranges of the continuous values have been scaled for use with an ANN (by dividing by 200).  **Attribute Information:**  Given is the attribute name, attribute type, the measurement unit and a brief description. The number of rings is the value to predict: either as a continuous value or as a classification problem.  Name / Data Type / Measurement Unit / Description  -----------------------------  Sex / nominal / -- / M, F, and I (infant)  Length / continuous / mm / Longest shell measurement  Diameter / continuous / mm / perpendicular to length  Height / continuous / mm / with meat in shell  Whole weight / continuous / grams / whole abalone  Shucked weight / continuous / grams / weight of meat  Viscera weight / continuous / grams / gut weight (after bleeding)  Shell weight / continuous / grams / after being dried  Rings / integer / -- / +1.5 gives the age in years  The readme file contains attribute statistics.  **Relevant Papers:**  Sam Waugh (1995) "Extending and benchmarking Cascade-Correlation", PhD thesis, Computer Science Department, University of Tasmania.  [[Web Link]](http://rexa.info/paper/3c616efbe82f890e5984ab9f95c574977b0280a2)  David Clark, Zoltan Schreter, Anthony Adams "A Quantitative Comparison of Dystal and Backpropagation", submitted to the Australian Conference on Neural Networks (ACNN'96).  **Papers That Cite This Data Set1:**  Ilhan Uysal and H. Altay Guvenir. [Instance-Based Regression by Partitioning Feature Projections](http://rexa.info/paper/5b9d84cbe5327bcd60f720ca1424f815b6b08753). Applied. 2004. [[View Context](http://archive.ics.uci.edu/ml/support/Abalone#5b9d84cbe5327bcd60f720ca1424f815b6b08753)].  Edward Snelson and Carl Edward Rasmussen and Zoubin Ghahramani. [Warped Gaussian Processes](http://rexa.info/paper/351e173bc2176dbf14635cc5471660c911f8e79c). NIPS. 2003. [[View Context](http://archive.ics.uci.edu/ml/support/Abalone#351e173bc2176dbf14635cc5471660c911f8e79c)].  Jianbin Tan and David L. Dowe. 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[[View Context](http://archive.ics.uci.edu/ml/support/Abalone#e7628956b46a78e64774af25d99c0afd0cf90001)].  **Citation Request:**  Please refer to the Machine Learning Repository's [citation policy](http://archive.ics.uci.edu/ml/citation_policy.html) |

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