

First Programming Exercise of Machine Learning Course

Find out the age of Abalone from physical measurements

The data set has 4177 rows and 9 columns and physical measurements of abalones and the number of rings (representing age). 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.

The Following data dictionary gives more details on this data set:

Column Position	Attribute Name	Definition	Data Type	Example	% Null Ratios
1	Sex	Sex (M: Male, F: Female, I: Infant)	Quantitative	"M", "F", "I"	0
2	Length	Longest Shell measurement (millimeters - mm)	Qualitative	0.530, 0.440, 0.425	0
3	Diameter	Diameter - perpendicular to length (mm)	Qualitative	0.350, 0.380, 0.300	0
4	Height	Height - with meat in shell (mm)	Qualitative	0.095, 0.150, 0.110	0
5	Whole weight	Weight of whole abalone (grams)	Qualitative	0.5140, 0.2255, 0.6845	0
6	Shucked weight	Weight of meat (grams)	Qualitative	0.1940, 0.1675, 0.0975	0
7	Viscera weight	Gut weight after bleeding (grams)	Qualitative	0.1010, 0.1495, 0.0490	0
8	Shell weight	Shell weight - after being dried (grams)	Qualitative	0.330, 0.115, 0.245	0
9	Rings	Rings - value + 1.5 gives age in years (eg. 4 = 5.5 years)	Qualitative	19, 8, 29	0

Acknowledgement

This data set has been sourced from the Machine Learning Repository of University of California, Irvine Abalone Data Set (UC Irvine). The UCI page mentions the following study as the original source of the data set:

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)

