## Predicting the age of abalone from physical measurements

Project Proposal

**Overview / Introduction:**

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.

**Question / Need:**

In this project, I will predict the age of the abalone through its physical measurements, which are represented by a 9 of feathers are:

|  |  |
| --- | --- |
| Sex | The abalone gender |
| Length | Longest shell measurement |
| Diameter | perpendicular to length |
| Height | with meat in shell |
| Whole weight | whole abalone |
| Shucked weight | weight of meat |
| Viscera weight | gut weight (after bleeding) |
| Shell weight | after being dried |
| Rings | +1.5 gives the age in years |

The analysis will be based on 4177 abalone measurements information

**Data Description:**

This project originated from<https://archive.ics.uci.edu/ml/datasets/Abalone>that offered by uci.edu , which contain 4177 of different abalone information With 9 features for each of them, we can consider all of them to be very important. which will help us solve the problem and get prediction result.

The model that I used is Logistic regression, it will deal with many characteristics, most notably are: Sex, Length, Diameter , Height , Whole weight, Shucked weight , Viscera weight , Shell weight And Rings Where the common physical characteristics of each age will be studied to predict ages for future data without referring to the usual age examination

**Tools:**

- Numpy and Pandas for (EDA) Exploratory Data Analysis

- Scikit-learn for modeling

- Matplotlib and Seaborn for plotting

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