

Fish Weight Prediction Project Report

1. Introduction

This project aims to predict the weight of fish based on their physical measurements using Machine Learning. It is a supervised regression problem where the target variable is the fish's weight. **2.**

Dataset Description

The dataset used is the official YBI Foundation Fish dataset. It includes columns:

Species/Category, Height, Width, Length1, Length2, Length3, and Weight. **3. Methodology**

- Loaded dataset from YBI GitHub repository.
- Selected relevant features for prediction.
- Split dataset into training and testing sets (70%–30%).
- Used Linear Regression model from scikit-learn.

- Evaluated model using Mean Absolute Error (MAE) and R^2 Score. **4. Model Used**

Linear Regression is chosen for prediction due to its simplicity, interpretability, and effectiveness on numerical datasets. **5. Results**

After training the Linear Regression model, predictions were made on the test data. Evaluation metrics used:

- Mean Absolute Error (MAE)
- R^2 Score

These metrics indicate good model performance. **6. Conclusion**

The Fish Weight Prediction model successfully predicts weight from measurements. The model can be improved further using advanced algorithms like Random Forest or XGBoost.