

# Pro1d - 8 models Report

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## Introduction

I will compare between regressor models or classifier models, depending on the problem/question the data represents.

## Regressor Models (8 models):

- Decision tree regressor
- Random forest regressor
- XGB regressor
- Linear Ridge regressor
- Bayesian Ridge regressor
- K Nearest Neighbors regressor
- MLP Neural network regressor
- Gaussian Process Regressor

## Classifier Models (9 models):

- Decision tree classifier
- Random forest classifier
- XGB classifier
- SVC classifier
- K Nearest Neighbors classifier
- SGD classifier
- Gaussian Naïve Bayes
- MLP Neural network classifier
- Gaussian Process Classifier

## 1. Advertising

Type of model: regressor

Best model: XGB regressor

Root mean squared error (RMSE) = 0.8716

## 2. Auto

Type of model: classifier

Best model: XGB regressor classifier and Random Forest classifier

Accuracy = 69.6203%

### 3. College

Type of model: regressor

Best model: Ridge regressor

Root mean squared error (RMSE) = 12.1351

### 4. Credit

Type of model: regressor

Best model: XGBoost regressor

Root mean squared error (RMSE) = 87.6719

### 5. Heart

Type of model: classifier

Best model: MLPClassifier (XGB regressor & GaussianNB are also good)

Root squared mean error = 88.5246%

### 6. Income

Type of model: regressor

Best model: XGB regressor

Root squared mean error = 5.4018

### 7. Saheart

Type of model: classification

Best model: GaussianNB classifier

Root squared mean error = 73.1183%