

### Model Development Phase Report

Date	12 July 2024
Team ID	Team - 739960
Project Title	Abalone Age Prediction
Maximum Marks	4 Marks

#### Initial Model Training Code, Model Validation and Evaluation Report

The initial model training code will be showcased in the future through a screenshot. The model validation and evaluation report will include Model Training and accuracy score, presented through respective screenshots.

#### Initial Model Training Code:

```
from sklearn.tree import DecisionTreeRegressor
dtr=DecisionTreeRegressor()
dtr.fit(x_train_scaled,y_train)
```

▼ DecisionTreeRegressor  
DecisionTreeRegressor()

```
from sklearn.ensemble import RandomForestRegressor
rfr=RandomForestRegressor()
rfr.fit(x_train_scaled,y_train)
```

▼ RandomForestRegressor  
RandomForestRegressor()

### Model Validation and Evaluation Report:

Model	Accuracy Report	Accuracy Score
Decision Tree Regressor	<pre> model=pickle.load(open("model.pkl","rb")) ip=([2,0.455,0.365,0.095,0.514,0.225,0.1010,0.1500]) model.predict(ip)  array([11.])  acc11=dtr.score(x_train_scaled,y_train) print("Accuracy of DecisionTreeRegressor is:",acc11*100)  Accuracy of DecisionTreeRegressor is: 100.0 </pre>	100%

Random Forest Regressor	<pre>pickle.dump(rfr,open("abalone.pkl",'wb')) model1=pickle.load(open("abalone.pkl",'rb')) ip=([2,0.455,0.365,0.095,0.514,0.2254,0.101,0.150]) model1.predict(ip)  array([12.57])  acc12=rfr.score(x_train_scaled,y_train) print("Accuracy of RandomForestRegressor is:",acc12*100)  Accuracy of RandomForestRegressor is: 93.51817674152262</pre>	93%
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