

Model Development Phase Template

Date	June 22,2024
Team ID	739882
Project Title	Income Activities Using Machine Learning
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 classification reports, accuracy, and confusion matrices for multiple models, presented through respective screenshots.

Initial Model Training Code:

```
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x, y, test_size=0.2)
```

```
print(x_train.shape)
print(x_test.shape)
print(y_train.shape)
print(y_test.shape)
```

```
(275, 6)
(69, 6)
(275,)
(69,)
```

```
[ ] rf_model.predict([[0,213,18,2009.0,20.118277,27]])
```

```
⇒ array([5.8])
```

```
[ ] rf_model.predict([[31,54,18,2011.0,7.022699,31]])
```

```
⇒ array([5.44])
```

Model Validation and Evaluation Report:

Model	Classification Report	F1 Score
Random Forest	<pre>[] rf_model.predict([[0,213,18,2009.0,20.118277,27]])</pre> <pre>⇒ array([5.8])</pre> <pre>[] rf_model.predict([[31,54,18,2011.0,7.022699,31]])</pre> <pre>⇒ array([5.44])</pre>	58%

