

Model Development Phase Template

Date	2 July 2024
Team ID	SWTID1720086522
Project Title	Forecasting Economic Prosperity: Leveraging Machine Learning For GDP Per Capita 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 classification reports, accuracy, and confusion matrices for multiple models, presented through respective screenshots.

Initial Model Training Code:

```
[15]: #linear regression
      from sklearn.linear_model import LinearRegression
      lr=LinearRegression()
      lr.fit(x_train,y_train)
      y_pred1=lr.predict(x_test)
```

```
[16]: #random forest
      from sklearn.ensemble import RandomForestRegressor
      rf=RandomForestRegressor()
      rf.fit(x_train,y_train)
      y_pred2=rf.predict(x_test)
```

```
[17]: #support vector regression (svr)
      from sklearn.svm import SVR
      svr=SVR()
      svr.fit(x_train,y_train)
      y_pred3=svr.predict(x_test)
```

Model Validation and Evaluation Report:

Model	Classification Report	Performance	Confusion Matrix
Linear regression	-	67.68%	-
Random forest regressor	-	81.39%	-
Support vector regressor	-	-16.47%	-