**Model Development Phase Template**

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| Date | 15 March 2024 |
| Team ID | xxxxxx |
| Project Title | Forecasting Economic Prosperity: Leveraging Machine Learning For GDP Per Capita Prediction |
| Maximum Marks | 6 Marks |

**Model Selection Report**

In the forthcoming Model Selection Report, various models will be outlined, detailing their descriptions, hyperparameters, and performance metrics, including Accuracy or F1 Score. This comprehensive report will provide insights into the chosen models and their effectiveness.

**Model Selection Report:**

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| **Model** | **Description** | **Hyperparameters** | **Performance Metric (e.g., Accuracy, F1 Score)** |
| Linear Regression | A simple linear approach that assumes a linear relationship between inputs and the target variable. | Default | MSE: 21883733.766837504,  R^2: -0.9441781713294894 |
| Random Forest | An ensemble learning method that constructs multiple decision trees and outputs the average prediction. | n\_estimators=100, random\_state=42 | MSE: 7133952.090909091,  R^2: 0.36621080852875953 |
| Support Vector Regression | A regression model that uses the principles of Support Vector Machines (SVM) for regression tasks. | kernel='rbf' | MSE: 15330417.613966553,  R^2: -0.3619733999691279 |