

Model Development Phase Template

Date	9 JULY 2024
Team ID	739880
Project Title	Leveraging Machine Learning for GDP Per Capita Prediction
Maximum Marks	6 Marks

Model Selection Report

A model selection report on GDP typically involves evaluating various econometric models to determine the best fit for predicting a country's gross domestic product (GDP). The process begins with the collection of relevant data, including historical GDP figures and potential predictor variables such as consumption, investment, government spending, exports, and imports. Various models, such as linear regression, ARIMA (Auto Regressive Integrated Moving Average), and machine learning models like random forests or neural networks, are then constructed and tested. Model performance is assessed using criteria like R-squared, Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), and out-of-sample prediction accuracy. The final selection is based on a balance between model complexity and predictive accuracy, ensuring that the chosen model provides reliable forecasts without overfitting the data.

Model Selection Report:

Model	Description	Performance Metric (e.g., Accuracy, F1 Score)
Model 1	Logistic Regression Model	Accuracy: 0.99 F1 Score: 0.99
Model 2	Random forest model	Accuracy: 1.0 F1 Score: 1.00

Model 3	Gradient Boosting Regressor	Accuracy: 1.0 F1 Score: 1.0
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