Project Initialization and Planning Phase

Date	15 March 2024
Team ID	xxxxxx
Project Title	Forecasting Economic Prosperity: Leveraging Machine Learning For GDP Per Capita Prediction
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

This proposal aims to leverage advanced machine learning techniques to create a robust solution for accurate GDP per capita prediction, addressing the limitations of traditional methods and providing valuable insights for stakeholders.

Project Overview	
Objective	To develop a machine learning model that accurately forecasts GDP per capita by leveraging historical GDP data and various economic, social, and demographic factors.
Scope	The project will focus on collecting and preprocessing relevant data, developing and training a machine learning model, and validating its accuracy. The solution will be applicable to multiple countries and provide forecasts for various time horizons.
Problem Statement	
Description	Traditional methods of forecasting GDP per capita often fail to incorporate a wide range of influencing factors, leading to less reliable predictions.
Impact	Solving this problem will provide policymakers, investors, and businesses with more accurate economic forecasts, enabling better decision-making and strategic planning.
Proposed Solution	
Approach	Utilize machine learning techniques, including data preprocessing, feature engineering, and model training. Implement algorithms like

	linear regression, random forests, and neural networks to build and evaluate the model.
Key Features	• Integration of diverse datasets encompassing economic, social, and demographic variables. • Use of advanced machine learning algorithms for improved accuracy. • User-friendly interface for easy access to predictions and insights.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	2 x NVIDIA V100 GPUs
Memory	RAM specifications	32 GB
Storage	Disk space for data, models, and logs	1 TB SSD
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	Scikit-learn, pandas, numpy, Tensorflow/Keras
Development Environment	IDE, version control	e.g., Jupyter Notebook, Git
Data		
Data	Source, size, format	World Bank and other economic databases, CSV format, 37.4 KB