**The Impact of Economic Indicators on National Income**

**Abstract**

This research aims to investigate the impact of specific economic indicators—Gross Domestic Product (GDP), GDP growth, foreign investment, inflation rate, and government spending—on national income levels. The primary objective is to determine whether these indicators can be utilized to predict national income levels through machine learning models, thereby aiding in economic forecasting and policy formulation. By understanding these relationships, we aim to provide insights that can enhance decision-making processes in economic planning and development.

To achieve the research objective, a high-level methodology has been designed. Economic data spanning three years for various countries have been downloaded from a comprehensive data bank. An Entity-Relationship Diagram (ERD) has been developed, leading to the creation of a small database tailored to store the necessary data. Queries have been executed to extract relevant data points. The data will be cleaned and explored using Python, benefiting from its robust libraries for data visualization. Subsequently, machine learning models, including logistic regression, decision tree, random forest, XGBoost, and neural networks, will be developed and evaluated to ascertain their reliability in predicting national income levels based on the selected economic indicators.

The expected outcome of this research is the development of a reliable machine learning model capable of predicting national income levels using the identified economic indicators. This model will provide valuable insights into the dynamics between these indicators and national income, which can be instrumental for economists and policymakers. Additionally, this research will contribute to the field of economic analytics by demonstrating the potential of machine learning in economic forecasting. The findings may also guide future research endeavors aimed at enhancing the precision and applicability of economic predictions in various contexts.