

Predictive Analyses of Economic Factors Driving National GDP

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Abstract—Since the early 2000s, the global economy has generally been on an upward trend. Despite factors such as geographic location, land mass, and hostile neighbors, many nations' GDP is driven by consumer spending, and business investment. Some nations credit a sizable portion of their GDP to their entertainment and tourism sectors. Over the last two decades, the advancement of technology has facilitated growth in all sectors, transforming the market and digital landscape as time went on. Trends in technology adoption and changes in consumer behavior amplify the economic impact of streaming. Streaming contributes to GDP through recurring subscriptions, investment in original content and infrastructure, and global service exports. Understanding which streaming trends most strongly influence entertainment-sector GDP can help explain sector growth and support future forecasting models. GDP forecasting is a crucial component to policy-making and business planning. In order to do so, we must be able to bring in many complex, non-linear factors such as tourism, military spending, import/export, birth rate into the equation in order to make these forecasts. We will be training and predicting using 2 different models to predict the GDP of the USA, England, and Japan for 1 year in the future. We will compare the two for which has better accuracy. One of the models is Facebook's Prophet which is a Bayesian-based regression model for univariate time series forecasting. Our goal is to get within 85 percent accuracy for our predictions.

https://github.com/yomisamadesu/DS_ML_Project_colab_integration

Index Terms—machine learning, economics, predictive analysis, gross domestic product

I. INTRODUCTION

GDP is a way that governments measure the health and development of their country. We will be trying to create models that will forecast a country's GDP in the future.

II. THE LARGEST SECTORS OF ECONOMIES

The areas in the targeted economies that exhibit the most growth/data are consumer spending, import/export, government spending, and tourism.

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III. CLASSIFICATION OF THESE ECONOMIES

Using methodology from the World Bank and United Nations, countries and their economies will be evaluated at globally accepted standard.

IV. METHODOLOGY

Multiple predictive analysis models will be created and trained up to 85 percent accuracy. A variety of data points will be gathered from the various economic sectors.

V. REFERENCES

REFERENCES

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