

## INFORMATICS INSTITUTE OF TECHNOLOGY

## In Collaboration With

### UNIVERSITY OF WESTMINSTER

## Predicting USA GDP and Recession Probability Using Economic and

#### **Non-economic Indicators**

A dissertation by

## Mr. Shajeeran Manoharan

Supervised by

## Prof. N. D. Kodikara

Submitted in partial fulfillment of the requirements for the BSc (Hons) Computer Science degree at the University of Westminster.

# ABSTRACT

Over the last seven decades, the world economy has undergone four worldwide recessions: 1975, 1982, 1991, and 2009. Annual real per capita global GDP decreased throughout each of these periods, and this contraction was followed by a deterioration of other important indices of global economic activity. In the past decades, financial institutions, businesses, and governments have all demonstrated a keen interest in forecasting economy and predicting recessions with GDP in order to make timely choices.

While most the economic forecasting and predicting modal consider economic, and financial indicators or Financial News article, the Author of the research consider U.S. economic and finance indicators with the general news articles describing Financial, Political stability and social factors.

Using VADER for sentimental analysis and LSTM, Author come up with the approach to show 93% accuracy for GDP prediction and 73% accuracy for recession probability prediction.

Keywords: Macro economy, Economic indicators, News Articles, Sentimental analysis