Towards Election Forecasting Using Sentiment Analysis: The Zambia General Elections 2021

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Abstract

During the run up to the 2021 general elections, two opinion polls were conducted. One poll suggested that HH would emerge victorious whilst the other predicted that ECL would emerge victorious. The variance in the two opinion polls leaves room for alternative approaches to predicting election results. This study proposes sentiment analysis as part of the initial stage to building an alternative solution to predicting the outcome of an election leveraging sentiments shared on social media during the build up to the August 2021 general elections. The findings of the study reveal that as the election day drew close, there was an exponential increase in the number of tweets that were posted on a daily basis. Further, our analysis of the tweets revealed that the majority of the tweets were neither positive nor negative (they were neutral) in line with the Afrobarometer opinion poll. Initial findings are promising to drive towards election forecasting using sentiment analysis.

Introduction

In Zambia, opinion polls have been used to predict the outcome of elections since 1999. During the run up to the 2021 general election, two opinion polls were conducted. The opinion poll by Political Science Association of Zambia (PSAZ) suggested that Edgar Chagwa Lungu (ECL) would get 48.4% and the opposition leader, Hakainde Hichilema (HH), would get 45.2%. Meanwhile, an opinion poll conducted by Afrobarometer had a representative of 1,200 Zambians drawn across all the ten provinces. The results of this opinion poll showed that support for ECL declined to 22.9%, HH 25.2% said that they would vote for HH and 45.6% refused to answer [3]. However, HH was declared president elect of Zambia on the 16th of August, 2021 by the Electoral Commission of Zambia (ECZ) after obtaining 59.02% of the while ECL obtained 38.71% of the votes [2]. The variance in the opinion polls and the actual results leave room for more accurate predictions. This study aims to use AI to analyze the sentiments that were expressed online in relation to the 12th August Zambia general elections. We believe that the work presented in this study is a fundamental initial step towards performing a trend analysis which can ultimately lead to an alternative approach to election results forecasting.

Materials and Methods

The following is a summary of the materials used.

Findings

The findings of the study reveal that as the election day drew closer, the number of tweets exponentially increased. For example, over 73% of the total sample were tweets that were posted 11 days before the elections. A similar pick is observed during the 2016 elections.

References