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**BA4318 BUSINESS PROCESSING
WITH PYTHON**

**TERM PROJECT
FORECASTING OF USAGE OF
INSTAGRAM AND FACEBOOK**

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INTRODUCTION

This paper examines and describes the details of the term project of “Business Processing with Python”. We have evaluated and estimated the growth in the total numbers of users of Instagram and Facebook. In this project, we have applied some forecasting models in order to estimate the growth on the usage of both social networks. In order to estimate the growth rate of the users, we have found the growth rate of the world population and then the growth rate of users. Since the number of users will increase as the population increases.

DATA GATHERING

We have gathered data on a quarterly basis for the usage of both Facebook and Instagram. However, data concerning with world population is in years. Thus, we have arranged world population data according to a quarterly basis.

The data was obtained from techcrunch.com and statista.com which are shown in the reference section.

DATA ANALYSIS

The data set did not have any missing values and they were in line with each other. So, we did not see any problem in the data. We can observe that there was a steady increase in the usage of Facebook and the World population. Also, we saw the same trend in the usage of Instagram as well. We haven't observed any seasonality trend for any of them.

APPLIED FORECASTING TECHNIQUES

By using the best forecasting tool, firstly we wanted to estimate the next quarter for all three data sets. We have tried all methodology in order to compare which methodology is working with minimum errors.

We have used Moving Average method, Simple Exponential Smoothing, Holt-Winters' method, Holt's method.

As we have said above that we have tried all methodology and we understood at the end that Holt's was the best method. So, we have conducted our forecasts accordingly.

RESULTS (CONCLUSION)

When we forecasted the remaining periods for all three series and looked at the growth rates, the results we have obtained were striking. The population of the World is forecasted as 7,612,338,500 for the year 2018, with the Instagram users being 323,440,2711, and Facebook users 2,318,387,220. The growth rates in this order are as follows, 1.088%, -1.989% and 8.896%.

The results clearly show that while the World population is increasing at a steady rate, Facebook is much faster than it. Also, Instagram seems to be gaining users at a higher rate than the increase in population.

REFERENCES

1. <https://techcrunch.com/2017/04/26/instagram-700-million-users/>
2. <https://www.statista.com/statistics/253577/number-of-monthly-active-instagram-users/>