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Application of Big Data and Text Mining Methods and Technologies in Modern Business Analyzing Social Networks Data about Traffic Tracking

Emir ŽUNIĆ, Almir DJEDOVIĆ
Info Studio Ltd Sarajevo
Sarajevo, Bosnia and Herzegovina
emir.zunic@infostudio.ba, almir.djedovic@infostudio.ba

Dženana ĐONKO
Faculty of Electrical Engineering, University of Sarajevo
Sarajevo, Bosnia and Herzegovina
ddonko@etf.unsa.ba

***Abstract*—Big Data is becoming one of the most important technology trends with a potential for a dramatic change in which organizations use information in order to improve the customer's experience and transform their own business models. Big Data as a concept is new in the world of technology and therefore requires research in technological or business sense. Management and analysis of large amount of network offer huge benefits and challenges for all organizations. The amount of information floating through social networks increases every day, and represents a rich source of data, if it is properly processed. The aim of this paper is to show on a concrete example the profit of the system implemented over Big Data from social networks using Text Mining methods and technologies, as well as semantic processing and clustering, storaging and possibility of later examination and treatment.**

Keywords—Big Data; Text Mining; Data Mining; Social Networks; Twitter; API;

I. INTRODUCTION

For the last couple of years, information technologies have been more and more dynamic, applications and services have been moving to the Cloud, processing of transaction data has been expanding by the processing of interactive data from the social networks such as Facebook, Twitter, Linkedln, which all cause the change of "input channel" to the individual applications and information from the use of desktop computers to more frequent use of mobile communicators. Various forms of mobile communication devices are more frequently used for the access to the applications, not only for communicating. Using mobile devices, everyone can easily use or even develop an application, so it can be said that it leads to so-called explosion of applications and information. For the last three years, human society has created and preserved more information than in the entire history [1].

The need to make decisions is based on the accumulated knowledge and it is something that cannot be changed but only used to the significant extent, but the very way of collecting and processing information necessary for making decisions must be adapted to the new environment. Nowadays, companies are concerned about so-called data-driven way of thinking and operating, actually, their decisions are driven by data. The needs in terms of data significantly increase; companies require more qualitative and more diverse data in order to expand their analyses and acquire a broader perspective on their customers. The question is: Is it possible to get more qualitative data which can improve the process of making decisions in modern business? The contribution will be analyzed through technological and economic approach.

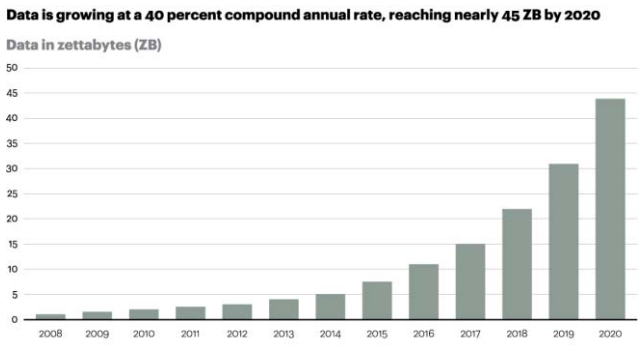

Fig. 1. Data trend [4]

Big Data concept, as well as its impact is analyzed in this paper, just as the usability of this concept in the existing systems of the business intelligence for making business decisions. The usage of Text Mining methods is also presented on an example of collecting, processing and analysis of data from the social networks (Twitter) via API (Application Programming Interface), which in combination with Big Data concepts represents an extremely strong possibility in the modern business deciding.

II. BIG DATA CONCEPT

The scope of what is considered as Big Data is broad, while definitions are contradictory and difficult to understand. The most widely accepted definition of the term Big Data derived from the analysis of META Group (now Gartner), which was conducted in 2001. According to that definition, the term Big Data mans the information resource of large quantity, high speed and great diversity of data, which requires modern and innovative methods of processing and optimization of information, improving access into the data content, and