

A Visual Demonstration based on Social Media Analysis of Refugees in Turkey

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Abstract—Since 2014 to date, the population of refugees in Turkey exceeded three millions which creates a necessity to study their needs and conditions as well as their opinions. We propose a method to analyze the dataset collected from social media accounts of refugees in Turkey in a textual and visual manner. Firstly, we acquire social media activities of refugees, then we make textual analysis for which the results are presented using wordclouds. Finally, for the most significant words obtained from the textual analysis, we perform a visual analysis to find out the most representative image or a group of images shared in social networks. This association between textual and visual results enhance their perceptibility and help decreasing the ambiguity of inferences over analysis results.

I. INTRODUCTION

Turkey accommodates more than 3 millions of Syrian refugees who were forced to leave their country [1], due to seven years war in Syria. Social media is considered in many studies as one of the accelerators of the Arab spring and its usage have accompanied majority of the events [19]. Having a dataset of refugees in Turkey has the potential to facilitate a number of future studies.

”A picture is worth ten thousand words”, as the historical Arab philosopher Alnafri said. In contrary, analysis of the social networks are usually based on textual information, for which it is not easy to understand the underlying meaning of the textual results out of their context. Thus, it should be accompanied with additional cognitive elements such as auditory or visual items.

Moreover, in the case of Arabic, the difficulty of correctly stemming words and absence of accents and movements in the digital text [6] leads to less comprehensible results, i.e, same textual representation may have totally different meanings. Since this paper deals with analysis of refugee’s activity on Social Media and the big majority of refugees in Turkey communicate in Arabic [1], a visual demonstration of the analysis is essential to decrease the aforementioned ambiguity.

In addition, to enhance the perception of analysis results, in this paper, we propose a method to summarize the refugees perspective in Turkey by choosing an image or group of images out of the shared multimedia in specific time margin related to a specific word or topic. The images are automatically selected so that the most representative ones are gathered and shown while also avoiding unnecessary repetition among the set of selected images.

This graphical presentation could enable a better understanding of refugees’ needs for better planning in future intervention to solve social, economical and maybe political refugee issues and aspects in Turkey; the country hosting highest number of refugees in the world today[21].

II. RELATED WORKS

People share enormous amounts of data on social media which led to numerous studies in the last decade. These studies cover, on the first hand, a wide range of aspects according to availability of various kinds of data, e.g, textual [12], [13], locational [2], and visual [18], etc; on the other hand, it deals with a rich variety of applications and topics.

One of the most popular topics is arguably elections. During this time, social media produces numerous comments and news concerning candidates’ statements. Quite a few studies take place on literature in order to predict the elections in terms of forecasting the results [15], [5], [11]and understand how posts reflect the political sentiment in society [20] . On the other hand, this popularity of social media data being analyzed to predict elections or similar concepts and the easiness of proposed methods in relevant articles to announce the winner beforehand led some researches to question the reliability of such research. For instance, in [8] it is claimed that predicted results obtained via Twitter data has been exaggerated.

Immigration and refugee was an important issue to be studied and analyzed, thus many papers performed these studies in order to understand the motivations, challenges and hopes of refugees. As an example of refugees related work, the study in [9] explores the ideas of users towards refugees by means of collected tweets including #refugeesnotwelcome hashtag. The work in [14] also exploits tweets including same hashtag to understand the portrayal of male Syrian refugees on social media.

Most of the aforementioned studies rely on textual analysis. In addition to textual data, multimedia content existing in social media is also valuable for performing analysis and there are also studies in that category [16]. Snavelly et al. [18] proposed a method for exploring large amounts of photographs which can be possibly acquired from social media. Another study tries to calculate 3D visual popularity from social media