Public Perception of a Country: Exploring Tweets About Qatar

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ABSTRACT
Is it possible to "hack" an image of an international entity by driving international and domestic media? Here, we present an image/brand monitoring tool for a country, Qatar, which presents an overview of the contexts and references to media in which it is mentioned on social media. Tracking dozens of languages, this tool allows a global understanding of the perceptions and concerns Twitter users associate with Qatar, and which mainstream media may be driving these sentiments.

CCS CONCEPTS
• Human-centered computing → Empirical studies in HCI;
• Social networking sites; • Applied computing → Sociology;
• Information systems → Web mining;

KEYWORDS
Nation Branding, Public Opinion, Twitter

1 INTRODUCTION
Since winning the bid for the FIFA World Cup 2022 in December 2010, beating a bid from the United States, Qatar has received a lot of international attention. For example, a blog article1 from May 2015 was shared more than 32k times on social media. Qatar’s official response2 also posted by the Guardian only received 540 social shares. Similarly, an article in the Washington Post3 which contained factually inaccurate claims “went viral”, whereas Qatar’s official response4 received little attention.

Here we present a simple tool that aims to visualize the public discussion surrounding Qatar on Twitter in different countries. Our tool is publicly accessible at http://scdev5.qcri.org/TweetsAboutQatar/.

Related to our work is research on how often Twitter users in different countries mention a Twitter user in another country [1] or how often Twitter users have international follow links [5]. Furthermore, work on news coverage in one country on disasters in another country also relates to country-specific media attention [3]. However, as far as we know, no prior work has looked at in which contexts a target country is being mentioned on social media around the globe. Work on "nation branding" on social media is also different but related. For example, [2] studies the active use of Twitter of the Obama administration as a means of diplomacy. Our tool, by contrast, is only for monitoring, not for engaging.

2 DATA COLLECTION AND PROCESSING
As a first step, we compiled a list of translations of the name "Qatar" to 35 distinct languages, including English, Arabic, Portuguese, and German. Tweets containing one of these references were then collected through the Twitter Streaming API. This was done for a period from 3rd of May to 15th of November, 2015, with one two week period inadvertently omitted, resulting in a total of 4,458,914 tweets.

Metadata including the posting date and time, the user-disclosed location (location from their bio page), and, most importantly, the tweet text, were parsed out. Tweets were geo-coded to countries by passing user-disclosed location to Nominatim, which provides geo-coding for the OpenStreetMap project5, resulting in 1,837,280 geo-coded tweets. For each country, terms as well as bi-grams (two-word phrases) were extracted, and for each of them the distinct users using them were counted. Finally, frequently used terms were then visualized by using wordclouds for each country with more than 30 distinct users. Thus, our tools using Carto map6 shows data for 660,006 distinct users, covering 173 countries.

3 THE INTERFACE
The main element of the visualization is a world map (as shown in Figure 1). Countries are color-coded by the number of tweets captured – from many (dark blue) to few (light yellow/green). Countries that are marked as white did not have the required minimum number of tweets to be included in the analysis. Clicking on a country brings up an info box with a summary of the tweets originating from this location. The main element of this info box is a tag cloud that shows the most frequent uni- and bi-grams after the removal of stop words. The tag cloud provides an intuitive summary of the topics that dominate the discussion of Qatar originating from this country. The second most important element in the info box is the list of domains that are referenced in tweets mentioning Qatar, providing insights into whether the discussion is influenced more by domestic media or by international media. Finally, the info box also provides the raw tweet count.

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1https://goo.gl/48MTu
2https://goo.gl/J8wM6Ga
3https://goo.gl/wmyCUW
4https://goo.gl/2vebuZ

5https://wiki.openstreetmap.org/wiki/Nominatim
6https://carto.com/
4 EXAMPLE USE CASES
The tool allows discovery of both commonalities and distinctiveness in topics across countries. In most countries, the World Cup is mentioned quite frequently. However, what aspects of the World Cup are tweeted about can be quite different. In the United States, migrant workers are a common topic, but there is very little mention of the FIFA bribery allegations. However, in France and Australia, the corruption issue is prominent. Yet, users in Australia also Tweet about the migrant worker issue. In Spain, migrant workers are mentioned although corruption is not, while in India the topic is dominated by different issues such as fans and Qatar Airways. There are also topics popular in one country that are barely mentioned in others. For example, Xavi’s move to play for a local side in Qatar is frequently mentioned in Spain whereas elsewhere it is almost non-existent. Our tool allows the comparison of the common themes within and across countries, making discovery and analysis of social media content easy for analysts. Similar analysis can be done by utilizing the tool to examine what domains are tweeted most often – both within and across countries – enabling the discovery of opinion influencers in regional and global social media content.

5 CONCLUSIONS
The tool in its current form is simple but attempts to address an important task: summarizing the global social chatter on Twitter involving an entity – Qatar in this case – and giving hints at who “drives” this discussion. Through this tool one can easily discover that the topics are generally similar and that part of the reason for this convergence could lie in similar sources being referenced around the globe. It may also assist in addressing the growing concern over foreign influence on domestic politics, such as the alleged Russian “hacking” of US elections, where information may be strategically released by international players. Going forward, it could be interesting to attempt to detect “global astro-turfing” or trolling using approaches such as Truthy [4].

REFERENCES

https://goo.gl/e6ZIVn