Bridging the Gap between Open Data and Data Sensemaking for more Engaged Citizens

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INTRODUCTION

Tackling major research problems that affect a country in multiple scales requires experience in various domains, for example: engineering, modeling, policy and data analysis. These skills and level of work are often found in research labs or national think tanks, creating a class of educated and politically and economically aware citizens exclusive to the research community. On the other side, a participatory culture is happening as the emergence of social media, and citizens are actively engaged in the informal online conversations discussing government initiatives and policies. However, these conversations are rarely supported or validated with data, which affects the general public’s understanding of economic and political issues. In this research we explore the possibility of leveraging the collective knowledge that is produced in the research labs to bridge the gap between the government and those who are excluded from participating in the shared understanding of the local policies and public data.

THE SAUDI DATA VISUALIZATION AND ANALYSIS PLATFORM

The government of Saudi Arabia is advocating for more data transparency as seen through the OpenData initiative, for example. In addition, the number of Internet users is increasing and according to the Communications and Information Technology Commission, 70% of the population have internet access (2016). However, citizens are still excluded from participating in the shared understanding of government policies and public data. The data is available in raw format and scattered across different local and international resource. Most citizens are not aware of the data available or not able to gain benefits from this availability due to many factors, for example: technical difficulties, language barriers or time constraints.

At the Center for Complex Engineering Systems, a national research institute based at KACST in Riyadh and MIT in Cambridge, the challenge for our HCI group is to leverage the collective intelligence produced from the different research groups at the center and make it accessible to the public. The research projects are often done in collaboration with local organization to tackle real world problems and mostly end up as a report or a set of recommendations to the stakeholders. The research findings and models are often based on publicly available data from Saudi and international resources. Developing an inclusive platform to make these data analysis and models accessible and reusable by the public is the goal.

The platform will help us answer the following research questions: How can we improve the participatory culture of the citizens and enhance the quality of online conversations that take place in public social media websites? Would providing an accessible interactive visualization platform increase their level of engagement and understanding of the government new policies? Would these data visualizations and analysis serve as teaching tools by providing example of what could be produced from the publicly available data?

DESIGN PROCESS

The connected intelligence platform that we are developing is designed in two phases. The first phase is to launch the interactive visualizations to the general public (historical data). The second phase is to allow users to interact with the models that generated these visualizations and change the decision variables to produce new results (prediction).

In this position paper my focus is on the interactive visualization platform, Saudi Explorer. The platform allows the users to explore the data visualizations and filter based on the scale (country, regional and city) or the domain (e.g. energy, transportation, economy, water, social etc.). A user centered design process was followed in which surveys and interviews with the general public were conducted, the sample was diversified and recruitment happened through snowballing through science week, research groups, universities, social media etc.) Usability studies were conducted to enhance the ease of use and the readability of the visualizations. The platform is still in its first version, more studies will be conducted when the platform is launched to validate the effectiveness and reusability of the insights shared through the platform.

REFERENCES


