

Collective Intelligence and Crowds

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The papers in this mini-track take different approaches to analyze the influence and quality of web-based information. The first is about how edits affect the quality of Wikipedia entries; the second is about roles and motivation in the Twitter feeds of social movements.

Most people go straight to the web when they have a question they would like to research. One of the most trusted sources for information is *Wikipedia*, and others follow a similar format of crowdsourced entries and editing.

Since *Wikipedia* is created and maintained by crowdsourcing, it is useful to understand what types of edits increase or decrease its quality.

The first paper *Effects of stigmergic and explicit coordination on Wikipedia article quality* by Kevin Crowston and Amira Rezgui from Syracuse University, addresses this by looking at the difference in quality of *Wikipedia* entries based on coordinating the edits either explicitly (through the talk page) or stigmergically (indirectly – by direct edits to the page).

Using supervised learning to analyze the quality of the edits and using the record of changes contained in the file, they determined if specific changes improved or reduced quality. Both methods improved quality, but for different types of edits.

This information can prove valuable for the architecture of similar systems and guide people to what is the most effective way to improve a *Wikipedia* page with which they are involved.

Social media is a significant factor in current social movements such as #metoo, #maga, #extinction-rebellion, and many more are channels through which people coordinate and mobilize. Most people on these lists are unknown to us in any other context, including the “power users” that tend to guide the discussions. It is useful to know the motives of the

power users, not the least because social media is now being used as a weapon of war to destabilize nations, and it can improve our judgments about veracity.

The second paper, *The Role of Social Media during Social Movements – Observations from the #metoo Debate on Twitter* by Felix Brinker, Magdalena Wischniewski, Milad Mirbabaie, and Judith Meinert from the University of Duisberg-Essen, takes advantage of the Twitter feed of the #metoo movement to roles of actors and their motivation.

The paper provides support for the contention that social media is having a significant impact on social movements, and shows that the #metoo movement initiated on Twitter.

They gathered data by harvesting tweets from Twitter. From their dataset of tweets identified, they “power users” with SNA using several centrality measures. They extracted the most central and created categories for the users using an iterative method, which they discuss. They then classified all the tweets in their dataset according to the categories they developed.

The categories are roles such as “media outlet,” “celebrity,” “bot” ...

Next, they analyzed the tweets to discover the motive for participation. They found that different roles had different motives, some merely to publicize themselves.

These papers provide new methods of analyzing parts of the web that have become ubiquitous in the lives of much of the world. The information that users get from the web is not always useful and can even be damaging. This research can lead to better ways of managing and vetting the information, something that will benefit us all.