Crisis Response Coordination in Online Communities

Whom to coordinate with, Why to coordinate and How to coordinate

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Motivation

- During recent crises, citizens (sensors) are increasingly using social media to share variety of information-situation on the ground, emerging needs, donation offers, damage, etc.
- In such a dynamic community, how to extract actionable nuggets from the social media streams to aid relief efforts?

A big challenge is the very small signal to noise ratio!

How to transform the micro-level (tweets) signals into actionable nuggets for macro-level analysis (coordination)?

Social Media will aid the existing relief workflows, rather than replace!

Approach Highlights

a. Coordination here means managing the competitive intentional behaviors (e.g. needs, offers)
b. Psycholinguistic cues help to filter messages with higher information gain for coordination [1]
c. Domain dependent analysis helps to understand the context of intentional behavior and therefore, organize information in semantically rich data inventories [2]
d. Contextual queries (needs against offers, vice-versa) across space and time help to generate recommendations for both responders as well as informal social community actors [2,3,5]
e. Interactive engagement interface with spatio-temporal-thematic and people-content-network analyses allows coordinators to prioritize what to focus and whom to engage with [2,4,5]

Application: This framework can be applied to coordinate information seekers vs. helpful knowledgeable users and lurkers in domain-specific forum communities (e.g., Diabetes disease)

References:


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