

Social Technology: Wisdom of the Crowds (Carmel)

Linking systems engineering with human behavior theory

Researcher : Dr. Ofer Arazy

Background

New collaborative possibilities afforded by the internet allow groups of individuals to share information, self-organize, and co-create information-based goods. Given that interactions in such settings are technology-mediated, all communications, events and co-creation activities are recorded in system logs. Mining these system logs could reveal deep insights about collective behavior, inform the administrators of such a collaboration system, and help designers improve the technology platform.

Open Online Collaboration: From System Logs to Behavioral Insights

Prof. Ofer Arazy of the University of Haifa's Department of Information Systems researches computer-supported cooperative work (CSCW) and knowledge management. His research aims to link the area of information systems engineering with theories of human behavior from fields such as linguistics, psychology and sociology. This linkage is bi-directional. First, understanding human behavior could help guide the design of information technologies (IT); and second, an understanding of IT's capabilities could guide novel organizational forms and processes. The project is motivated by these two perspectives for linking systems engineering with human behavior theory.

Research Status

In particular, Prof. Arazy's research of social media and the Internet of Things (IoT) involves the analysis of data from both humans and sensors (e.g., motion-triggered cameras) to detect meaningful patterns of behavior, and interpret those patterns in light of behavioral theories.

He has been employing this approach to study online production communities (e.g., Wikipedia, open source software development) and citizen science projects (e.g., volunteer-based environmental monitoring). For example, he has investigated topics such as users' motivations, participation trajectories, the communities' role structures, quality control procedures, and community-based governance.

Potential Applications

Synthesis of Social and Technological Systems

Smart cities involving citizens in city-level reporting and decision making
Citizen participation in environmental projects (e.g., monitoring nature data)
Crowdsourcing, collective intelligence, and prediction markets
Community-based peer-production (e.g., open source software development)
Additional areas:

- Transportation
- Health (e.g., monitoring the spread of epidemics using social media)
- Innovation markets & open innovation

Contact us for further information.

Related pages

[Ofer Arazy, Prof.](#) - Researcher page

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