Minitrack Introduction: Decision Support for Smart City

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Abstract

This minitrack includes research papers in decision support for smart city and digital services. It covers important research topics such as social media, mobile computing and social network analysis for knowledge sharing.

1. Introduction

Decision Support for Smart City and Digital Services minitrack focuses on the application of business intelligence and analytic tools for smart city and digital services. With massive applications of Internet of things (IoT), mobile apps, social media, and social network platforms, large amount of heterogeneous data are gathered and processed with advanced analytic tools to support smart city and digital services. Furthermore, decision support tools, various IS theories and data mining techniques can be employed to speed up the whole process. To bring technical, behavioral, and managerial perspectives together, this minitrack provides new insights into decision support for smart city and digital services.

2. An Overview of Abstracts

The forthcoming minitrack papers emphasize providing decision support by integrating theories, sensor data processing techniques, and social network analysis. We summarized these leading studies in terms of three important issues in decision support for smart city and digital services.

2.1. Social media usage

Social media usage is popular and plays an important role in Web 2.0 age. By integrating two-factor theory and resource matching theory, Wu et al argued the controversial use of social media in the workplace, and further investigated both positive and negative outcomes of social media usage.

Based on the two-factor theory, they proposed that social media use at work engenders distraction and perceived relatedness, which in turn influence job performance. This study further drew on resource matching theory to posit that the perceptual load of the job moderates the effects of social media use at work on distraction and perceived relatedness. In practical terms, this study would shed light on the usage and management of social media in the workplace.

2.2. Mobile computing

Mobile computing has becoming an important issue with the rapidly growing cellular data usage and its significant role in providing fine-grained insights into various human behavior patterns. Yu et al collected the cellular data (e.g., voice and mobile data) to construct a new feature based on the geospatial distribution of cell towers connected by mobile users and employ bivariate kernel density estimation to help predict users' key locations. The evaluation results suggest that augmented features based on both voice and mobile data usage improve the prediction precision and recall.

2.3. Social network analysis

Social network analysis is one of the most important streams in decision support for smart city and digital services. Zhao et al proposed a personalized academic knowledge sharing system that takes advantages of author's initiatives in an online social platform to alleviate the information overload problem between academic readers and authors. The research combines user-level and document-level analysis on a popular academic social network, the systematic use of social network analysis, text mining, and research quality analysis is expected to bridge readers and authors, and further facilitate academic knowledge sharing.

3. Conclusions

The forthcoming papers provide different perspectives in terms of three main issues, i.e., social

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media usage, mobile computing, and social network analysis. The studies also shed lights on job performance, location identification and knowledge sharing. The contributions to these areas are appreciated, they bring new perspectives in both theory and technology.