香港浸會大學
HONG KONG BAPTIST UNIVERSITY
計算機科學系
Department of Computer Science

Department of Computer Science
Distinguished Lecture Series 2014/15

Urban Computing- Using Big Data to Solve Urban Challenges

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Abstract

Urban computing is a process of acquisition, integration, and analysis of big and heterogeneous data generated by a diversity of sources in urban spaces to tackle the major issues that cities face, e.g. air pollution, energy consumption and traffic congestion. Urban computing connects unobtrusive and ubiquitous sensing technologies, advanced data management and analytics models, and novel visualization methods, to create win-win-win solutions that improve urban environment, human life quality, and city operation systems. In this talk, I will present our recent progress in urban computing, introducing the applications and technologies for integrating and deep mining heterogeneous data. Examples include fine-grained air quality inference throughout a city, city-wide estimation of gas consumption and vehicle emissions, and diagnosing urban noises with big data. The research has been published at prestigious conferences (such as KDD and UbiComp) and deployed in the real world. More details can be found on http://research.microsoft.com/en-us/projects/urbancomputing/default.aspx

Biography

Prof. Yu Zheng is a lead researcher from Microsoft Research and a Chair Professor at Shanghai Jiao Tong University, passionate about using big data to tackle urban challenges. His research into urban computing has attracted a broad range of attention from the community, receiving five best paper awards at prestigious conferences (such as UbiComp'11, ICDE'13, and ACM SIGSPATIAL'11) (H-Index 33). Zheng is a member of Editorial Advisory Board of IEEE Spectrum. He has served as chair on 10 prestigious international conferences—most recently, as the program co-chair of ICDE 2014 (Industrial Track). He has been invited to give over 10 keynote speeches at international conferences and forums (for example, IE'14 and APEC 2014 Smart City Forum) and guest lectures in universities like MIT, CMU, and Cornell. Zheng has been featured multiple times by influential journals, such as MIT Technology Review and New Scientist. In 2013, he was named one of the Top Innovators Under 35 by MIT Technology Review (TR35) for his research on using data science to solve urban challenges. He was featured by Time Magazine due to his research on urban computing in November 2013. In 2014, he was named one of the Top 40 Business Elites under 40 in China by Fortune Magazine, because of the business impact of urban computing he has been advocating since 2008. Refer to his homepage http://research.microsoft.com/en-us/people/yuzheng/.

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