

# Understanding Human Behavior using Smartphones and Spatiotemporal Data

## Abstract

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Human behavior mining is an important task in the ubiquitous computing era. Delivering relevant services or information based on the users' activity context could bring great benefit to the users. The latest advances in smart devices (e.g., smartphones, smartwatches) unlock the possibility of understanding users' context continuously with a less obtrusive approach. However, unlike motion activities (e.g., sitting, standing, or walking), human activities (e.g., having a meeting, driving to the office, having lunch) require more sensory data which captures users' context at the moment and are more complex to be identified. Therefore, various information from multiple sources collaborates to model the users' behavior and pattern. In addition, due to the space and energy limitation of smart devices, users' behavior model should be minified. To address this issue, we proposed a new preprocessing methods based on the selection of values in the data. Finally, even though human activity is highly personalized based on the users' preferences but we could not neglect the importance of social influence from close friends. Based on the mobility data generated, one could identify the social relationship between two people. This work is a collaboration work with Prof. Wen-Chih Peng (National Chiao Tung University, Taiwan) and Dr. Kuo-Wei Hsu (Microsoft Taiwan).

## Speaker

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Dr Gunarto Sindoro Njoo  
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Gunarto Sindoro Njoo is a recent Ph.D. graduate from National Chiao Tung University, Taiwan, majoring in Computer Science and Engineering. Prior to the study in Taiwan, Gunarto has finished his bachelor in Sepuluh Nopember Institute of Technology, majoring in Informatics Engineering. His research interest is exploratory data mining, especially regarding spatiotemporal data and location-based social network analysis.

## Details

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**Monday, May 27, 2019**  
**10:00 AM - 11:00 AM**

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Meeting Room 4-4, Level 4

School of Information Systems, Singapore Management University, 80  
Stamford Road, Singapore 178902, Singapore

**We look forward to seeing you at this research seminar.**

## Register

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