Editorial: Mobile Recommendations for Location-Based Services and Social Networks

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1 Editorial comment

In recent years, more and more geo-labelled data are available benefit from advanced hardware (positioning systems, environmental sensors), software (standards, tools, network services) and the ever-growing mentality of sharing (crowdsourcing for geographic tagging). Based on human activities, many daily web/App services (Facebook, Tweeter, and Foursquare) generate data and traces that are often transparently annotated with location and contextual information. And such services make it easier to collect and combine rich and diverse information about locations. Exploiting geo-labelled data provides a tremendous potential to materially improve existing and offer novel types of recommendation services. Those recommendation services bring benefits for many domains, including social networks, marketing and tourism. This special issue includes five selected papers with high quality.

The first article titled "*Contactless Continuous Activity Recognition based on Meta-Action Temporal Correlation in Mobile Environments* "focuses on three key problems in RF-based CAR: denoising, segmentation and recognition. This paper presents the design and implementation of a contactless and sensorless continuous activity recognition system, namely WiCheck, which utilizes the temporal correlation between two adjacent actions in continuous activity to eliminate the cumulative error in continuous activity segmentation. The second article is "*RFnet: Automatic Gesture Recognition and Human Identification using Time Series RFID Signals*", which proposes RFnet, a multi-branch 1D-CNN based framework. RFnet explores the possibility of directly utilizing time series RFID signal to recognize static/dynamic gestures as well as the identity of users. RFnet can benefit a large number of applications such as smart homes where security is a prior concern. The third article titled "*Three-tier Architecture Supporting QoS Multimedia Routing in Cloud-assisted MANET with 5G Communication (TCM5G)*" came up with a scheme, where partitioning and clustering are performed to optimize the cluster size. Specifically, partitioning is performed by the improved monarch butterfly optimization algorithm and clustering is selected by computing the importance rate. The fourth paper is "*P2P Network Based Smart Parking System Using Edge Computing*", which studies a friendly and effective smart parking system in a large city. This paper proposes a P2P network based smart parking system using Edge Computing. The fifth article is "*Service Function Chain Placement for Joint Cost and Latency Optimization*" formulates a multi-objective optimization model to joint VNF placement and link embedding in order to reduce deployment cost and service latency with respect to a variety of constraints. And then the paper solves the optimization problem using two heuristic-based algorithms that perform close to optimum for large scale cloud/edge environments.

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