HBTOnto: An Ontology Model for Analyzing Human Behavior Trajectories

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Abstract : Social Network has recently played a significant role in both scientific and social communities. The growing adoption of social network applications has been a relevant source of information nowadays. Due to its popularity, several research trends are emerged to service the huge volume of users including, Location-Based Social Networks (LBSN), Recommendation Systems, Sentiment Analysis Applications, and many others. LBSNs applications are among the highly demanded applications that do not focus only on analyzing the spatiotemporal positions in a given raw trajectory but also on understanding the semantics behind the dynamics of the moving object. LBSNs are possible means of predicting human mobility based on users social ties as well as their spatial preferences. LBSNs rely on the efficient representation of users' trajectories. Hence, traditional raw trajectory information is no longer convenient. In our research, we focus on studying human behavior trajectory which is the major pillar in location recommendation systems. In this paper, we propose an ontology design patterns with their underlying description logics to efficiently annotate human behavior trajectories.