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DATA MINING TO DEVELOP A SAFETY WORK MANAGEMENT APP BASED ON RECOMMENDER SYSTEM WITH BIM AND LBS

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ABSTRACT

Applying to business education and labors' safety training, unlike the traditional way in the past, will bring a more location-based of innovative services through mobile-oriented environment. The research considers the phenomenon and its importance on the middle-aged workforce of the construction in recent years, and provides security services- a recommended system through Building Information Model (BIM), Location-Based Services (LBS), and Mobile App. For maximum optimization of resources for system design, it integrates functional modules to construct an innovation system of safety work and management with "context-aware" and "safety training records".

In order to enhance the safety of pre-working and working safety, the study will collect the initial data of safety training history in the work cloud service, and carry out real-time data analysis and sequence mining to find out the warning mode of affecting safety behavior. Sequence mining will use the concept of the phenomenon in monitoring, and extract the events, in order to establish the relationship between the time sequences, and then establish the exact rule of sequence calculation. It is in order to adapt to the middle-aged workers in the construction warning service with the security model.

KEYWORDS: Data Mining, Recommender System, Safety Working Training in Construction, Location-Based Service, Building Information Modeling