

## AN AGENT BASED APPROACH FOR DETECTION OF CLINICIAN ACTIVITIES: A FEASIBILITY STUDY

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### **Abstract**

This investigation focuses on the use of software agents to design an automated activity detection system in order to observe the physical movements of clinicians during a clinical activity. It involves finding suitable technologies to identify movements in clinical work and designing a rapid prototype system to detect an aspect of clinical work as a feasibility study. The proposed automated system consists of two components, a sensor system and an agent-based activity recognition system. The sensor system captures the physical movements of the person and the agent system recognize the particular actions and activities based on the captured sensor data. This study presents the designing and implementation of an agent-based system to recognize activities in an aspect of clinical work as a feasibility study. This feasibility study was undertaken before the main study is performed on a large-scale and a scenario study was undertaken to develop a prototype system as a proof of concept. Furthermore, it also presents the experiment of the developed prototype system with a set of sensor data that was collected from a motion capture sensor method in a simulated environment. The system was tested for a scenario of an aspect of clinical activities for this feasibility study. The experimental result reveals that the above feasibility study to develop agent-based automated system to detect clinician physical activity is promising.

**Keywords:** Agent based system, Clinical Activity Detection, Motion Capture Method