Abstract

Rapid growth in the field of wireless technology, body area network, personal area network and miniaturization in device has led to continuous health monitoring of moving patient which further can result into emergence of technology driven enhancement in contemporary healthcare practices. Can we have an Intelligent Applications in HealthCare (with knowledge base and inference engine) which can work on real time data stream initiating at sensor. For that we need to think of an application which can analyze sensed data stream, based on the past experience or rules specified as its knowledgebase to take decisions with in definite latency or delay. Can we think of an application which could record patient’s physiological condition and can automate the dosage induction based on the oddity arising in it? Memory size and energy at sensor provided by different vendors are two major obstacles in the design of such an application. Sensor depletes maximum energy in data transmission which could be reduced in terms of data size and number of communications. In this paper finds three gaps in initiation of such an application namely (i) projections for at sensor UDBMS architecture to upkeep ubiquitous computing, (ii) construction of the SQL code to analyze sensor data stream (based on joint
conditional probability) (iii) simulation of above code to compare (CPU time, elapsed time, communication time, communication energy) its execution at sensor with one device at some hop distance. Simulation results have obtained under various length real time sensor data stream are consistent and lead to the deduction that complex operation can be and should be advanced AP or at UI based sensor through SQL queries.

References

Index Terms

Computer Science

Information Systems

Keywords

UDBMS architecture, intelligent application, oddity in sensor real time data stream, indexing in UDBMS, MAX Heap with Binary Search