PROJECT DESIGN PHASE -2 TECHNOLOGY ARCHITECTURE

Project Name: IOT BASED SAFETY GADGET FOR CHILD SAFETY MONITORING AND NOTIFICATION

Batch Number: B5-51ME

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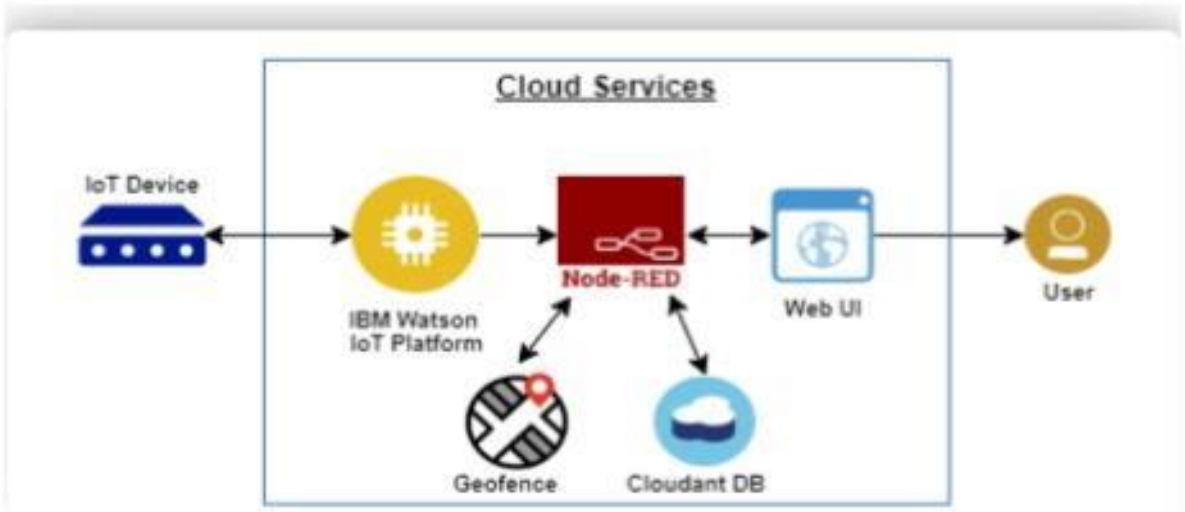
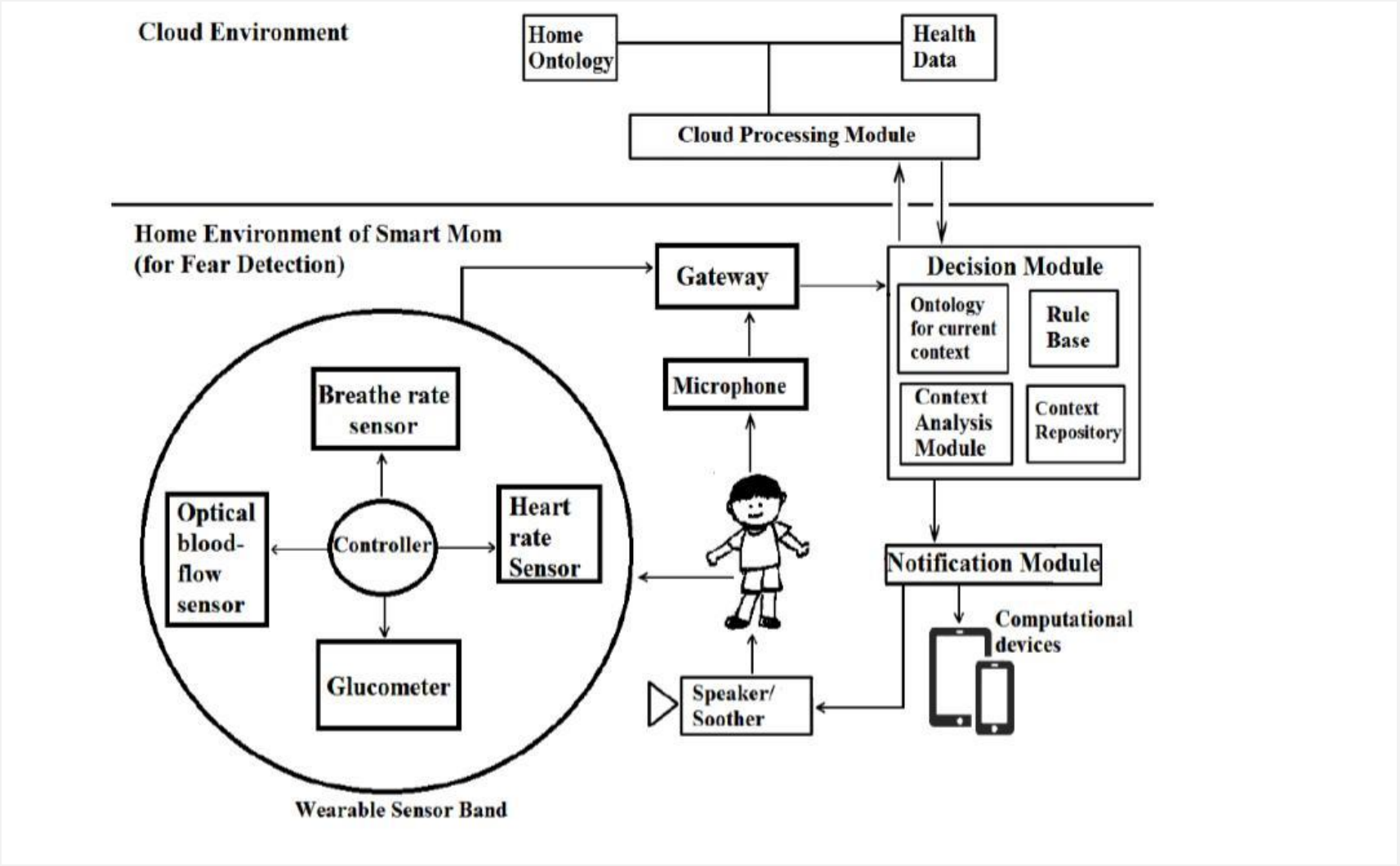
TECHNOLOGY ARCHITECTURE

This section discusses the architecture and the design methodologies chosen for the development of the Child Safety

Technical Architecture:



Node-RED allows you to create functionality by wiring together flows of data between nodes using a browser. And it has gained tremendous popularity in the IoT space, by modeling bits of application functionality between IoT devices like sensors, cameras, and wireless routers.


Cloud Environment
Home Ontology
Health Data
Cloud Processing Module
Home Environment of Smart Mom (for Fear Detection)
Gateway
Decision Module
Ontology for current context
Rule Base
Context Analysis Module
Context Repository
Microphone
Breathe rate sensor
Optical blood-flow sensor
Controller
Heart rate Sensor
Glucometer
Notification Module
Computational devices
Speaker/ Soother
Wearable Sensor Band

IoT enabled child tracking devices to continue to evolve. With devices coming in different shapes and sizes: clips, wearables, and phones

Child Tracking devices have reduced in size and weight and can be worn in many ways. Utilizing built-in loop, they can attach to shoelaces, belt loops, shirt tags or even buttonholes

To locate the child, IoT enabled tracking devices to use a combination of Bluetooth and GPS.
Parents can then use a smartphone app to set up a geofence around specific locations. They will then receive check-in alerts when the child leaves or arrives.

Also, another popular option is wristband wearables. They enable parents to stay in contact with their child. As are result giving the child more independence

- Keeps track of children in case of abduction
- Allows children more freedom while being watched
- Monitors children with special needs who wander
- Helps monitor children with behavioural problems
- Gives peace of mind to parents