Proposal on “Safety Tracking Bracelet” for Children, Aged & Handicapped(Specially Intellectual) using Deep Learning Algorithm

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1. Abstract:

"Safety Tracking Device" is the life saver smart device for babies, aged parents or handicapped persons (specially intellectual). In most of the cases, we fail to take care or track our children or aged parents 24/7 leaving them in unfortunate dangers like losing in street, falling in bathtub or near neighbor's pond. It contains GPS module, Stress Sensor, Pulse Rate Sensor, Temperature Sensor, Accelerometer, Shock Sensor, Oximeter Sensor and Sound Receiver. With the integration of all of the sensor values, the device can detect exact condition or feelings of the host body analyzing the data through deep learning algorithm.

2. Methodology:

Data Collection:

• Safety Tracking Bracelet uses GPS module for location, Sensors for collecting data from the host body using different methods and take the values in it’s processor.

Data Analysis:

• This Device takes the data samples into it’s processor and processes the signals into a valid response like sickness, movement, health condition. It uses deep learning method for further analyzing the data as feeling response for hunger, pain, etc.

Communication:

• This device uses GSM module so that it can communicate with any analog mobile device for sending data, report or any alarm signal.

• Integrated VMware communicates with server for analyzing data and make decision on the sample. It sends data to server for storing and accessing from any smart device connected to internet.

3. Problem Analysis:

- 9.3% is the death rate of children under age of 5 due to unwanted accidents like:
  - Choking
  - Electric shock
  - Lost in streets
  - Falling in bathtub or pond
- 16% senior citizens die each year due to lack of timely care.
- 1.3% autistic babies born every year who need 24*7 care.

4. Feasibility & Impact Analysis:

- Can be implemented easily and availability of components in market with low cost.
- Uses common wireless signal spectrum, no harmful effect for user.
- Can be used by any kind of users & smart system works with both smart devices as well analog mobiles.
- Frame can be made with fire and waterproof carbon fiber material for durability.
- Can save unexpected injury or death of targeted subject in a wide range.
- Real time tracking of targeted group of users becomes easy, affordable.
- Provides freedom within tracking range for better mental and physical growth of children.

5. Conclusion:

our target is to make a smart device, which is a bracelet with deep learning algorithm for detecting feelings, emotions and taking protection measures.

To build a bridge between the generations to save time and be active on the right time and at the right place.

To save the target group of people from very unwanted catastrophic incidents as well letting us understand their untold expressions.

6. References:

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