A SMART NECK WEAR FOR TRACKING CANINE WELFARE

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Introduction:

Smart neckwear can revolutionize the way we monitor the health of our canine companions. With integrated sensors and technologies, it can track vital signs and activity level providing invaluable insights into the well-being of dogs. Timely detection of health issues is crucial for effective veterinary care. Smart neckwear can facilitate early identification of abnormalities, enabling prompt intervention and potentially saving lives. Examine the possibilities for GPS tracking devices in smart neckwear, emphasizing the ways in which they improve security and safety. Talk about the uses of geofencing capabilities to keep pets from wandering into unsafe locations. The data collected by smart neckwear can be shared with veterinarians, promoting proactive healthcare. This collaboration between pet owners and veterinary professionals can lead to more informed decisions and personalized care plans. Pet owners can feel reassured and at ease knowing their pet's location, health status, and that they would be informed of any irregularities, particularly when they are away from their pets. To put it simply, smart dog neckwear meets the demand for proactive health monitoring, strengthens safety protocols, fosters better owner-pet connection, and adds to a more all-encompassing approach to pet care in an increasingly digital age.

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Objectives:

- To monitor vital signs like temperature and heart rate to identify any irregularities or health concerns early on.
- To track the location of canine.
- To allow pet owners or veterinarians to remotely access data.
- Enabling owners to receive alerts in real-time, if there is any abnormality.

Methodology:

- Initialization of sensors, microcontroller, GPS and Connecting it to GSM module.
- Set up the GSM module to establish a network connection and enable for SMS functionality.

- Continuously monitor the body temperature, heart rate and location using the respective sensors connected to the microcontroller. Read the sensor data and store it.
- If the collected data exceeds predefined threshold values for body temperature and heart rate, alert message is sent to the owners.
- Upload the collected data, including date and time, to the cloud platform for storage and further analysis. Ensure that the data is securely transmitted and stored.
- Recording of Step Counts taken by the canines per day using accelerometer sensor.

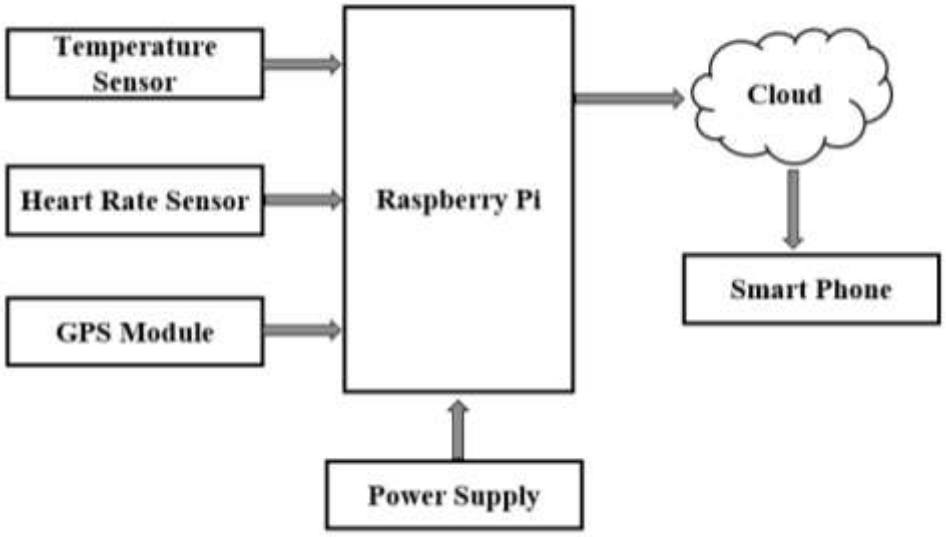

Fig: Block diagram of Smart Neck Wear for Canines

3.1 ALGORITHM

Step 1: Initialization of microprocessor and connect the necessary sensors for measuring body temperature and heart rate.
Step 2: Establishing the connectivity with the cloud to push the sensor data to the cloud.
Step 3: Continuously monitor the body temperature and heart rate using the respective sensors connected to the microprocessor. Read the sensor data and store it.
Step 4: If the collected data exceeds predefined threshold values for body temperature, proceed to the next step.
Step 5: Send an alert message to the owners via SMS. The message should include abnormal readings of body temperature.

Step 6: Upload the collected data, including the time and other date information, to the cloud platform for storage and further analysis. Ensure that the data is securely transmitted and stored.

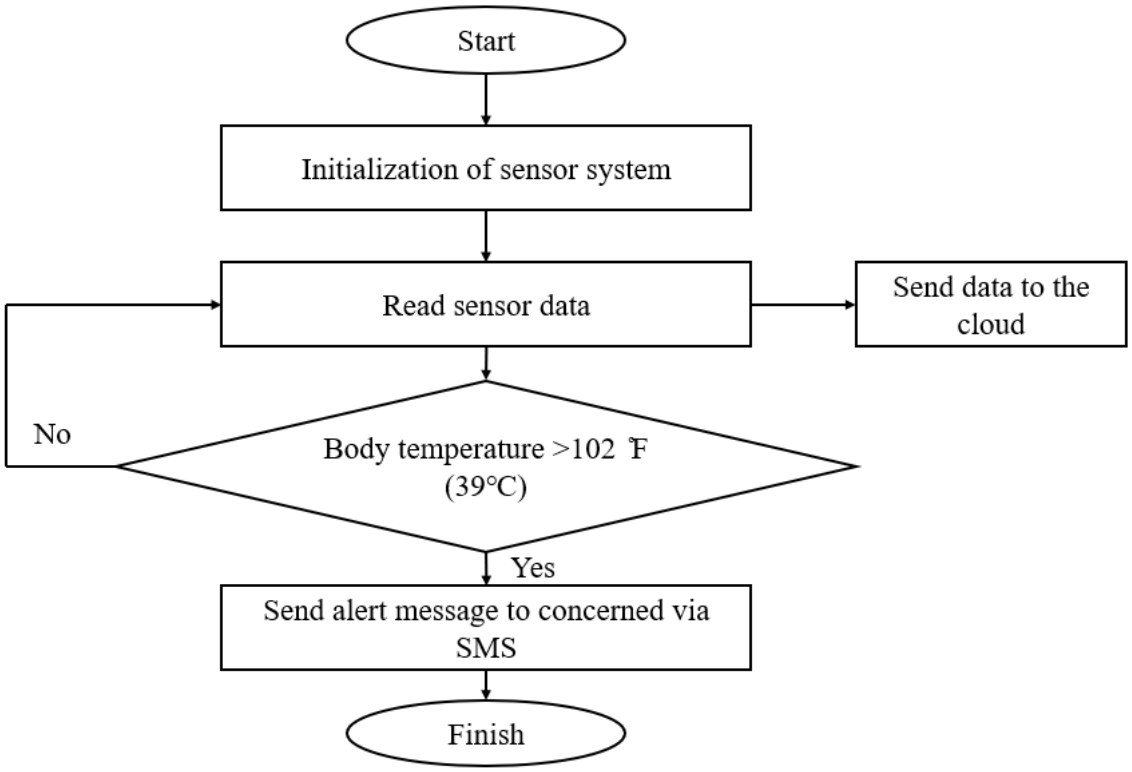

Fig 3.1 Flow Chart of Neck Ware

Conclusion:

- Monitoring system is capable of tracking vital health indicators like temperature and Heart Rate.
- Real-time location tracking aiding in locating lost pets.
- Continuous Monitoring of health and Collection of data.
- Sending Data to Cloud and storing data on Cloud which enables easy accessing of data whenever required by the owners or veterinarians.
- Sending real time Alerts or notifications to owners in case of abnormal readings.