**Velagapudi Ramakrishna Siddhartha Engineering College Department of Information Technology**

Class: 3rdYear Section: A Year: 2020-2021

**Hydration Management System**

**Motivation:**

In this current generation, people are not realizing the importance of water due to various factors such as increase of work pressure, unbreakable bond with the technology. This might result in some minor health issues which motivates us to develop the product that notifies the amount of water intake by considering all factors.

**Problem Description:**

Design a comprehensive intelligent IoT based system to calculate the amount of water to consume daily based on the meteorological condition of environment (includes temperature, humidity) and physical condition of an individual (includes age, gender, weight, height). Analyze the information obtained through the IoT system to identify the patterns based on age and gender.

**Social Benefits:**

* Our product improves the health of the busy working people by making them hydrated which inturn helps them to increase the energy levels, maintains the blood pressure and decreases the chance of getting the chronic diseases.

**Innovation and Uniqueness:**

* All the existing devices gives the amount of water level in body without considering the environmental conditions like humidity and temperature which shows greater impact on the level of water to be consumed.
* Our product considers metrological conditions and comes with the mobile application by which user can periodically monitor the dehydration level in the body and consume water whenever it notifies.

**Feasible Solution:**

We would like to present a intelligent service model for healthcare which gives an effective feedback to an individual regarding the amount of water to be consumed based on the temperature, humidity of surrounding environment in addition to the heart rate of the person and temperature of the body at that movement of time. IOT sensors DHT11 temperature and humidity sensors, Pulse rate sensor, Body Temperature Sensor that has connectivity to Node MCU ESP8266, a series of credit card-sized single-board computers are used to various body and environment conditions. So based on the amount of water loss, surrounding temperature & humidity, person’s heart rate and his/her internal temperature the amount of water intake varies. So this system provides an effective amount of water to be consumed by a person on a daily basis. This platform provides an environment where a person’s vital parameters are acquired by the devices, aggregated and analyzed. It helps in analyzing the data for a person and performs analysis in real time, ultimately promoting evidence-based water consumption.

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