Health monitoring system Smart City – Internet of Things

Since smart city concept has been introduced there has been many technological efforts to make it a success. One of the applications of the advancements in the sensor technology is to use it for health and environment monitoring. This health monitoring system application can be used to obtain valuable health care information about the population. The increase in stressful lifestyle is taking maximum toll on public health. Because of rise in health problems in today's world, the personal health monitoring of everyone is very important. The use of IOT Technology can establish an information network that interconnects hospitals, communities, healthcare devices, homes and other terminals.

With the above-mentioned view in mind, our project attempts to use the information obtained using sensors devices and individual vital signs data on the precautionary measures that one must take according their existing health conditions. Along with individual health monitoring, the array of sensors installed across the city provide further information about environment and health conditions around the city. The combined data of individuals and environment can then be used by doctors, health officials, etc**.** to take corrective measures and precautions in order to improve the health conditions of individuals and masses in general.

The application will take in data from four sensors: temperature, gas, dust, humidity. The data will be collected at various places using web services and API. The user will have to input individual data of vital signs: Blood pressure, Sugar level, Temperature, Weight, pre-existing diseases.

The data collected from the above-mentioned sources will then be used by doctors and health department officials to supervise heath conditions of the population though the automated analysis reports generated by the application.

The system will consist of 4 different users:

1. User: Each individual person will have to enter the vital signs data on everyday basis. It will have access to the history of his data. He will be able to communicate to doctor in case of any abnormal symptoms.
2. Doctor: Doctor will supervise the data received from users in an area. Based on the information the doctor can then communicate with the user about corrective actions and health conditions.
3. Hospital: It will take sensor data input as well as users vital sign data. Based on this combined data hospital will accordingly convey the doctors and users in the area about precautions and various organized activities. Hospitals will also send a weekly report of the vital signs and sensor data of the area to the Mayor.
4. Mayor/Health Department official: Will analyze the data received from the Hospitals from various areas to take administrative decisions about funding and health facilities to a particular area.

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