**ABSTRACT**

Internet of Things (IoT) is the interconnection of physical objects or devices that can transmit and receive data through the internet without human involvement. With the advancement in IoT devices particularly in healthcare sector, huge amount of data is collected from different sensors and all this data are transferred and stored in cloud. It becomes difficult to handle such huge amount of data in cloud specially the healthcare data where it requires real time data computation and storage. Security of the data is also major challenge in cloud. Fog computing is the answer to overcome the challenges. Fog nodes works at the edge side and enhances data security, accuracy, consistency and reduces the latency rate which is an important factor for application like medical data. Implementation work is also described in the paper where a digital human temperature sensor device is built using DS18B20 temperature sensor. The data collected from it is being encrypted in fog node using Advance Encryption Standard(AES) algorithm and it is send to cloud. Therefore, the security of the health care data is enhanced using Fog computing.