

*A Project Report on*

**AN IOT BASED VIRTUAL CARETAKER - ONLINE PATIENT  
MONITORING SYSTEM**

*Submitted in Partial Fulfilment of The Requirements for The Award of Degree Of*  
**BACHELOR OF TECHNOLOGY**

**In**

**ELECTRONICS AND COMMUNICATION ENGINEERING**

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**DEPARTMENT OF**

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**AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY**

**(NAAC Accredited, accredited by NBA, Approved by A.I.C.T.E, Permanently  
Affiliated to J.N.T.U. KAKINADA)**

**TAMARAM (P.O), MAKAVARAPALEM (M.O), NARSIPATNAM (R.D)  
VISAKHAPATNAM DISTRICT-531113**

**2017-2021**

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**BONAFIDE CERTIFICATE**

This is to certify that the project entitled “AN IOT BASED VIRTUAL CARETAKER - ONLINE PATIENT MONITORING SYSTEM” in partial fulfilment for the of degree of Bachelor of Technology in ELECTRONICS AND COMMUNICATION ENGINEERING, at AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, MAKAVARAPALEM, VISAKHAPATNAM is an Bonafide work carried out by, M. MANJULATHA (17A61A0430), G. PRUDHVI (17811A0421), T.RUPA (17811A0448), P. LALITHA VARMA (17811A0439) under the guidance and supervision during 2017-2021.

**INTERNAL GUIDE**  
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## ABSTRACT

Every human is busy in their own scheduled life, whether to take care of themselves or their families. Humans are facing a problem of unexpected deaths due to lack of medical care at the right time. The aim of this project is to monitor a patient without any presence of a guardian, it is also used for the patients who are living away from their families or guardians. Taking this present situation as an example, from the past two years the world has been facing a pandemic situation due to covid19, where we cannot mingle/communicate with affected patients. So, in this aspect “AN IOT BASED VIRTUAL CARETAKER-ONLINE PATIENT MONITORING SYSTEM” is one of the solutions for such patients.

Now-a-days technology plays a major role in many sectors, as well as in the healthcare related industry by using patient monitoring systems through “IOT” and “sensors”. Online monitoring of health helps to prevent sudden risks. as well as getting a complete diagnosis of patient health, without the need of a doctor.

The project “AN IOT BASED VIRTUAL CARETAKER-ONLINE PATIENT MONITORING SYSTEM” implemented locally used “sensors” such as ‘temperature sensor’, ‘oximeter sensor (SpO<sub>2</sub>)’, ‘MEMS sensor(accelerometer)’. Here the data which is collected by the sensor is given to an “Arduino nano microcontroller”. Later the data is transmitted to the guardian through the cloud where it is processed and analysed for virtual output by logging into the html webpage/message is sent through the gsm module which is connected to the microcontroller. Hence quick medication response is easily done by this system.

This system is efficient with easy setup, low power consumption capability, time to time response, and high performance.