



## Aakar'2021 - Project Expo

### Department of Electronics and Communication Engineering

#### REMOTE MONITORING OF RADIATION AND ENVIRONMENTAL CONDITIONS WITH TELEGRAM RESPONDER BOT

*Keywords: Raspberry Pi, IoT, Radiation, Temperature and Humidity*

#### Abstract

The main aim of this project is to implement a system that enables the monitoring of radiation and environmental conditions of a specific place from anywhere in the world, and to be alerted when either the radiation, temperature or humidity of the place exceeds the specified thresholds. The alert messages would be sent using a Telegram bot that concerned parties can interact with.

The process of working of this project is explained as follows: We use a Geiger-Müller Counter to measure radiation, and a DHT11 sensor to measure temperature and humidity. The location of the setup is determined using the Skyhook Precision Location SDK. Both sensors are controlled by a Raspberry Pi that is always connected to the internet, relaying the sensor readings and geographical coordinates to an endpoint on the internet – an InfluxDB instance hosted on the cloud. The Telegram bot fetches the readings from this instance whenever the user interacts with the bot. Alert messages however are sent using HTTP requests from the Raspberry Pi itself. This is done to reduce latency and to avoid delays.

Guide

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