Monday, March 14, 2022

LIMERICK LEADER

- THE DIGITAL NEWSPAPER -

Fyaz Ikram Module: IoT Project ISD4

Fyaz Ikram

Interloper PI Detector Headline News

According to Her.ie. "Limerick has the highest crime levels for criminal damage to property and house burglaries". Burglary and related offences reported in 2020 was 13,130 cases, of which 570 cases were reported from the limerick division, on the report of Phone Watch and Central Statistics Office. A smart home security system powered by the Internet of Things is an excellent way to secure your property since it gives you complete control over everything inside and outside your home. Smart locks, security cameras, smoke and motion sensors, and a slew of other devices communicate with one another to alert you if something goes wrong. You may check on it when inside or outside the house, or on travels all around the world.

The problem statement of this IoT application was to develop a lost cost and easy to use solution to help protect homeowners in limerick to avoid house burglaries. Due to the high rates of burglaries, in Limerick, Fyaz has developed an IoT application that detects motion within the house to monitor if any motion has been detected when the homeowners leave the house.

The importance of home security automation monitoring IoT systems are becoming increasingly popular and in demand in order for homeowners to be assured of when an intrusion occurs so they can take preventative measures to avoid it in the future, that is why Fyaz has created this IoT system to help homeowners feel more secure and safe when they leave home for work or if they leave on a long vacation to the Bahamas.



Picture Caption: Interloper Logo Branding Image



 $Picture\ Caption:\ Intruder\ in\ House\ Photo\ (Source-https://www.safewise.com/app/uploads/2016/07/intruder-social.jpg)$

Fyaz Ikram

How IoT is helping reduce the number of burglaries in Limerick

Interloper PI Detector

The solution developed for this IoT system was a Passive Infrared (PIR) motion sensor and Pi Camera connected to a Raspberry Pi that alerts homeowners via an Android app, Email and also via Telegram bot, sending a video, and photo capture if there is motion detected around the house when the homeowners is away. The motion sensor can be started remotely using the telegram app, which people already use making it more convenient for users to use the system as they do not need to install additional software's and tools. The main reason for this was to create an IoT system to make it more accessible and easier to operate for its users, as well as trying to significantly reduce the amount of burglary cases reported in the Limerick region each year by around 30% - 40%, to help safeguard houses in Limerick.

The Interloper PI Detector home intrusion detection IoT system is on the app store which displays a history of when the motion sensor was triggered, and the photo captures attached, and on the website which allows you to export the data to an excel spreadsheet, to see patterns of when the house was intruded (http://interloperpidetectors.epizy.com).

If the IoT system detects motion around the house and if the push button is not clicked within a specific time period, it would send alerts via the different platforms and also send a message to the Limerick Garda Station that there is a burglary in the house, therefore only allowing authorized people to push the button as the intruder would be unaware on how to disable the system. This would also help remove the problem of setting false alarms.

This IoT system aims on trying to reduce the burglary rate in the Limerick region initially and then try to commercialize the product in the future to different regions in Ireland, to help reduce the burglary rates all over Ireland.

Sponsored by and in partnership with IoT Partners.



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