

# Project Proposal on New generation of home security systems

## Project Summary:

Security is a something that we take very seriously. It could be job security, health, academic or financial. Home security is just as important as any of the previous ones as home is a place that is supposed to be safe and familiar. In the Year 2017 in Australia, there were 225900 burglaries recorded[1]. Even with the most advanced technology burglars still manage to break without anyone noticing. This project proposal will address this issue, investigate it and put forward a simple and cheap solution.

## Research Question:

- 1) How can a person be aware of a potential threat to the security of their house?
- 2) What benefits are provided to a person for using this method?
- 3) What are its advantages over traditional security systems?

## Aim:

- 1) To investigate and analyse the means and methods used by burglars to breach security systems.
- 2) To propose an alternate approach to implement security
- 3) To evaluate the pros and cons of the method used

## Analysis:

To investigate and understand the methods used we must look at every step individually. Usually as seen from reports burglars take less than 5 minutes to break into any house [2], this is done fast and as stealthily as possible.

They usually try to avoid cameras, a common practice is to sabotage the main power supply to the house. No electricity .... NO security[3].

## Alternate Approach to Security:

As we have seen from the analysis earlier we have seen that a very common method used by burglars to cripple security systems is to sabotage the power supply to the house. This can be overcome by using a wireless, simple, and low budget systems to tackle this.

An Arduino paired with a motion sensor and Bluetooth connection module is the perfect solution. This small and easily concealed system can be placed at every door and window. If there was a situation where someone decided to break into the house, they would be caught off guard as these tiny systems will not be connected to the main power line but an external power supply. As soon as the motion detectors monitor any activity in the area for more than a certain duration of time the Bluetooth module would send a notification to the phone of the home owner and they would be notified of any possible threats.

## Final Evaluation of Pros and Cons:

### Pros: -

- 1) This system would be active all the time and would not be limited to just the front and back door but also the windows.
- 2) Burglars would not be expecting this as since it is such a small setup it is very easily concealable

- 3) It is a very low budget setup compared to mainstream home security systems that may take a much larger sum of money to setup and install
- 4) Response time is very quick

#### Cons: -

- 1) Charging each setup may be laborious (this may be fixed with wireless chargers)
- 2) Since system is not smart it may be triggered by a pet or any such false alarm

#### Expected output:

- 1) Home owners would be far less concerned about having their belongings stolen or damages
- 2) New approach to home security would save many homes and reduce the number of criminals on the streets.

#### Reference:

[1] [2] <https://www.budgetdirect.com.au/home-contents-insurance/research/home-burglary-statistics.html>

[3] <http://www.toptenreviews.com/home/articles/breaking-the-system-common-methods-thieves-use-to-disable-your-home-security/>

