Introduction:

Since security and privacy has become something crucial nowadays, we decided to build a simple surveillance system designed mainly for houses but the general design can be used to larger properties such as companies parking lots or any sort of property that can be assigned one or more individuals

State of art:

While video surveillance technology existed in the 1940s, it didn't become mainstream until the 1970s. The images were grainy at first, but users could see images of visitors on a television monitor. An early advancement was made in 1966, when nurse Marie Van Brittan Brown invented the first home video security system. It was the first time a remote control could be used to open a door.

In the 1980s, security became a large part of home automation technology, as automated garage doors, infrared controls, and fiber optics became mainstream. These systems became more affordable in the 1990s. Today, automated home security systems are commonplace and controlled via familiar devices, including smartphones

Leading companies in this field

Homiri:





Homiris est un service opéré par EPS, le N°1 de la télésurveillance en France (3)

Plus de 500 000 abonnés nous font confiance

Pour protéger votre foyer, un système d'alarme connecté **mis à disposition et installé par nos soins.**

Avec Homiris, vous bénéficiez d'un équipement de haute technologie pensé et conçu pour assurer efficacement votre sécurité et celle de vos biens. Mais parce qu'être protégé ne veut pas dire bousculer son quotidien, nous vous proposons un matériel de télésurveillance efficace et discret. Sa mise à disposition, son installation et sa maintenance, y compris le changement des piles, sont incluses dans votre abonnement.



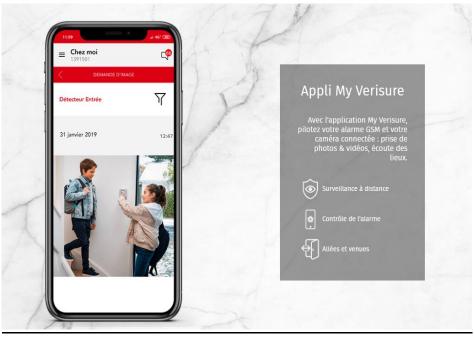
Description of their system

En cas d'intrusion, nous agissons immédiatement

- Le système d'alarme détecte et prend en photo l'intrus ; la sirène se déclenche et l'alarme est transmise au centre de surveillance
- En moins de 30 secondes (1), nous procédons à un appel de contrôle
- Vous êtes informé et pouvez consulter les photos prises
- Si nécessaire, et selon formule, nous dépêchons un agent de sécurité agréé à votre domicile et alertons les forces de l'ordre après levée de doute, conformément à la réglementation.

Verisure:





Sector alarm:

With 25 years of experience and 550 000+ clients across Europe, the difference between this company and the previous ones is that this company provides customized surveillance such as temperature monitoring, smoke detection, motion detection .. etc.



Description of their system:

Pourquoi Sector Alarm?

Avec Sector Alarm obtenez une réponse personnelle et immédiate 24h/24 - 7j/7 en cas d'incendie, de cambriolage ou lorsque vous utilisez le bouton panique. Grâce à nos services, réduisez de manière significative le risque de cambriolage ou d'incendie mortel dans votre habitation.

Nous fournissons un service de qualité supérieure grâce à nos équipes terrain présentes localement. Avec Sector Alarm profitez d'une assistance technique et des produits garanties à vie.

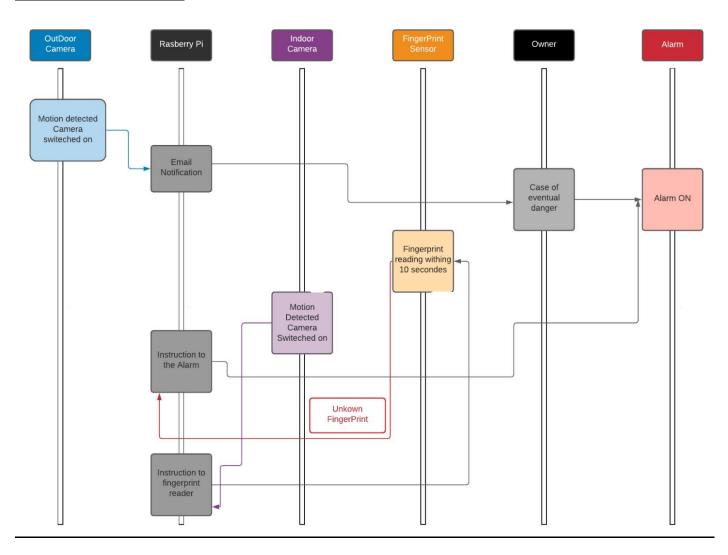
Our system design:

General functioning:

If the outdoor camera is detects a movement, it will be automatically activated and the owner will be notified via an e-mail notification.

If the object manages to access the property the indoor camera will take a picture of the detected object and email it the owner, he then will have the choice to trigger an alarm or not. if the fingerprint authentication fails the alarm will be triggered automatically within 10 seconds.

Sequence diagram:



Components:



Raspberry pi 3 B+ model



DollaTek Blue Light Optical Fingerprint Reader



USB to TTL convertor



Two Caméras : 2.4G Wifi sans Fil IP Caméra, IR Détection de Mouvement, Audio bidirectionnel et vision



The difference between our system and the other systems available on the market:

Most of the surveillance systems available on the market do not provide the customer with full access to the system so he can trigger the alarm by himself instead, if the system detects a potential threat the property owner will be automatically notified but the property has to be checked by a customer service agent.

This process is most of the time annoying and can represent a privacy issue for some people, since most of these systems can be used by malicious users to access to collect the owner's data and monitor his activity.