Watchdog

Intro

Security in South Africa is for ever changing. With many neighbourhoods having adopted large walls and electric fences, the need to control access and notify owners or security of breaches.

In this project we will create a proof of concept by using facial recognition to create an authentication system. This system should able to alert the owner and security company on any breach or potential breach that has occurred or is likely to occur. Providing the owner/security with information such as a video or image of the intrusion.

Background

This project will expose you to a wide variety of Amazon Web Services' tools as well as exposing you to modern day cloud architecture, storage, computing and security on Amazon Web Services. Due to this, there is room to experiment with different architectures and design patterns. We will look into the use of machine learning tools such as AWS Rekognition.

Requirements

System Core

- Identification of owner/security apart from intruder.
- Movement detection stream and Storage of videos on the cloud
- Allow User to select if they want to receive a SMS, Email or push notification
- Web application & Mobile to view historical footage and live streams

Other

- Due to the sensitivity of the data in transit all data must be securely encrypted at REST.
- A System which is highly scalable to grow with an increase of user demand
- The project must be accessible both on a mobile and web application, allowing users to stream live video on their mobile device and administrators to use a web application.

System Optional

- Ability to simulate an intrusion.
- Alert customization per user
- Global directory for search of wanted persons

Constraints

- All modules and tools used outside of AWS should be Open Source. All data is to be stored within AWS and must be securely encrypted.

Tech

The successful team will be responsible for motivating any technical decisions made and convincing the client as to their chose technology stack

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