Voice Controlled Security System

For Data Protection

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Introduction

The fast development of new technologies already enabling our everyday life, and the impact of it will affect our lives in the years to come. Recent developments in disruptive technologies such as artificial intelligence (AI), big data analytics, and quantum computing have symbolized the advent of what many have referred to as the 4IR. Artificial Intelligence is intelligence demonstrated by machines that work and react more like humans. The growth of AI depends on deep learning, machine learnings, and natural language processing that help computers accomplish specific tasks by processing large amounts of training data to help the system recognize patterns rather than programming it with specific rules. Machine learning, a subset of artificial intelligence, refers to perform a specific task without using explicit instructions, relying on patterns from the huge amount of data to the algorithm.

With the great accomplishment of 4IR, there's no restriction to create a machine of speech recognition. The first speech recognition machine was introduced in 1962. As the technology has evolved, it has become increasingly embedded in our everyday lives with voice-driven applications from our phones, computers, and even our watches, each new voice-interactive device that we put into our lives strengthen our dependence on artificial intelligence (AI) and machine learning.

Big companies have been the victims of security breaches which compromised email addresses, personal information, and passwords that are extremely vulnerable to cyber-attacks, compromising personal information, credit card information, and social security numbers. These are all reasons why biometric logins are a positive AI contribution to cyber security. The potential for speech recognition to apply in protecting data is extensive. Voice recognition is one of the biometrics to use, because it has the ability of a machine or program to receive and interpret dictation, to understand and carry out spoken command, and for identifying a person based on their voice.

This paper mainly focusing on the voice controlled security system that identifies if the word spoken matches the password or not. The process is for a device to decipher an analog signal, which is the voice of an authorized person to a digital signal then a program will pattern and compare it to recognize if the said word is valid or invalid to access your data. This system must have a digital database, or vocabulary, of words or syllables to understand the signaled password of an authorized person.