**Immerging Technology Research Project**

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## Organization Description

## A1. Products or Services Produced

Voiceright is a company founded in San Francisco, California. The main goal of the company is to produce voice recognition applications that enhance security practices. The company thrives on improving ease of use and customers of Voiceright use it for security voice-recognition locks. The company’s main competitive advantage is its 99.5% accuracy in voice recognition. This includes in noisy environments and areas that cause the quality of the original voice to go down. The company is highly esteemed in their voice recognition technology.

## A2. Organization Size and Number of Locations

Voiceright started as a company in 2017. The company currently holds 1, 500 employees across three locations—the headquarters in San Francisco, an office building in Los Angeles, and a smaller office builder held in Redwood City. The headquarters is where the products are created and where the mechanical engineers are held at. It has an internal network that the other facilities connect to through a VPN. The final two offices are smaller than the headquarters and contain software designers and customer support staff. 70% of staff that are needed for website and UI design work remotely from home.

## A3. Organization’s Industry

With online security problems arising from the pandemic, Voiceright’s main target is toward companies that are struggling with compromise of information. Voice recognition is one of the most secure methods to ensure protection from unwanted users. As voice recognition is a rapid market, the company deals with a great deal of competition and strives to stay on top of the most cutting-edge technology. The mission of the company is to improve the confidentiality of information by means of voice recognition to companies all over the United States. The company thrives on an agile method. This means that the company puts emphasis on getting the work done versus having set hours that employees must follow. Voiceright’s promotion of a calm work-culture allows the longevity of talented engineers and expects a life expectancy of over 21 years. All this had started from a few volunteer MIT graduates who were victims of a layoff in their previous companies from a big security compromise that resulted in the loss of over 200 employees. The MIT graduates created Voiceright and placed its focus on helping companies and employees from experiencing this loss from lack of decent security measures.

# B. Related Source Research

The chosen topic is voice recognition applications. The following subsections will include information about voice recognition, what it is, its security aspects, and why it is important. The following sections will include sources from other articles and publishers to backup the claims made in this paper.

## B1. Summary and B2. Importance

**What Is Voice Recognition**

Despite its growing popularity, voice recognition is still misunderstood by the public. This subsection will answer the question “what is voice recognition” with the help of the website, Computer Hope. Computer Hope is a website created first in 1998 by professionals to explain the functions of a computer to the public in simplified terms. It goes deeper into subjects that explain how the computer is first created. This section will only focus on the website’s explanation of voice recognition. Computer Hope describes voice recognition as “…*a computer software program or hardware device with the ability to decode the human voice*” (Staff, para. 1). This means that voice recognition is the process of the software listening to what a human is saying and figures out how to translate that to code so that the computer can read it. Computer explains that voice recognition “…*is commonly used to operate a device, perform commands, or write without having to use a keyboard, mouse, or press any buttons*” (Staff, para. 1). This source allows others to be informed of what it is and educates customers on the proper definition.

This source is important to Voiceright because it gives customers an idea of what they are using. The above mentions that voice recognition’s true abilities are not fully understood by the population and this source clarifies any misinformation that may be spread.

**Voice Recognition and Security**

The source being used is from Derek Scheips who is a member of Security Informed. The organization is made up of professionals who keep in contact with the security industry. Their job is to inform the public about online security and analysis. Security is Voiceright’s top priority and the reason why it is so effective is because voice recognition is currently the most common and user-friendly method of access control. Scheips writes: “*According to a Unisys survey, the biometric measures ranked by consumer preference are: voice recognition (32%), fingerprints (27%), facial scan (20%), hand geometry (12%), and iris scan (10%)*” (Scheips, para. 3). Iris scans and hand geometry are a couple of the most secure ways to access data. The issue with those two methods is that they are inconvenient and difficult to use. Voice recognition is the best method as it is not only highly secure but also much easier to use for users who are not familiar with technology. This source explains how voice recognition relates to security.

This source is important and relevant to Voiceright because it explains the security aspects of voice recognition. It also informs customers of why voice recognition would be the correct choice to use rather than other choices. Voiceright thrives on keeping their customers well-informed of what they are getting, and this source does the job for Voiceright.

**Why Voice Recognition Is Important**

This source is a post reporting the statistics of satisfaction when using voice recognition. It is from the company RingCentral which is a company that creates applications that assist with business communications and collaboration. According to the report, “…*72% of people who use voice search devices claim they have become part of their daily routines*” (RC, para. 12). The report also brings out that a benefit for voice recognition is accessibility. Voice recognition can be used for not only commands and verification, but also “*people who have speech and sight problems…those with disabilities or speech impediments*…” (RC, para. 17).

This source is important and relevant because it gives a report on the satisfaction that users have had when using voice recognition. It explains to the customers the advantages that voice recognition brings to users.

# C. White Paper

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The Rise of Voice Recognition

## Introduction

Technology is a fast-moving industry. One thing that is popular is then known to be obsolete. Voiceright is fully aware of this fact and thus uses the emerging technology to its advantage. Voice recognition software has been in existence since 1971 when IBM invented the Automatic Call Identification System. What makes voice recognition emerging is that there are now new ways to use voice recognition rather than a simple identification system. Before voice recognition was popularized and used to its fullest potential, companies including Voiceright would need to use devices that kept track of all passwords and access control rights. These devices also lead to web-like hierarchy charts of who had access to what. Employees generally kept these passwords using unsafe methods. These unsafe methods would include writing it in a notepad, sticky note, or other places where unauthorized users could easily find their passwords. This is especially dangerous as intruders have come previously and were able to gain access to the employee's computer because of seeing these notepads or sticky notes. The company tried releasing manual safety meetings to remind employees of keeping their information safe. However, human error would cause some to forget or even rebelliously choose not to listen. The company had to find a better solution to their employees’ security.

This is where voice recognition technology proved to be very effective to the company. With the help of voice recognition, the company was able to eliminate most security flaws. Voice recognition prevented the danger of leaving passwords behind on sticky notes or notepads. All voices are unique and even if an intruder were to see the passwords on these notes, if their voices do not match, they would still not be able to gain access. This simple fact and process has saved the company thousands of dollars in damage control. Another benefit of voice recognition to the company is during the quitting or resignation of an employee with a great amount of access. If the employee were to leave the company, the previous method using the web-like hierarchy chart would require the administrators to not only manually change all passwords, but also to realign all access privileges that the ex-employee had. Voice recognition changes this frustration as it only requires the administrators to cut the recognition of the voice of the ex-employee. Removing this recognition prevents the ex-employee from gaining access if the administration team misses or forgets to remove a password. This ensures maximum security while putting less stress and liability on the administration team.

One may wonder what makes voice recognition so emerging. Voice recognition is currently being used to help those with disabilities and protect security access control. The point of its original creation has expanded since the 70s and continues to grow in ability today and that is what makes it so popular. With the rise of artificial intelligence, it takes voice recognition to a new level of benefits. The need for voice recognition is also growing. Handheld devices are becoming more popular in use and having voice recognition has increased user satisfaction. The unfortunate reality is that disabilities are more common in the present than they were in the 70s as illness rates are rising. Cyber Security risks and issues have also become a global issue since the pandemic. More people and countries are becoming openly malicious as the world goes on and stress levels are higher. Voice recognition is popular because it is convenient and simple to use while simultaneously being secure.

Voiceright is mindful of these benefits and takes advantage of the security aspect that is growing by the second. Voice recognition gives Voiceright its competitive advantage as voice recognition is what the company is centered around. A benefit of voice recognition is that it is not uniform in its creation. Many companies can create different versions of voice recognition that would be completely different from another. This gives the company its competitive advantage. As voice recognition is different for every company, Voiceright makes sure to keep using voice recognition to its fullest potential. Many companies use Voiceright’s voice recognition technologies for uses as simple as creating or sending emails, or as complex as security access technology. The new and creative designs that voice recognition can have is what makes it unique and emerging. There are still many new ways to use voice recognition that are still being discovered. Voiceright ensures that they stay on top of the newest voice recognition technologies to ensure their clients the fullest benefits.

## Conclusion

Voice recognition is not a new creation in the industry since it was created in the 70s. The technology has benefited the company and that is why Voiceright does their best to advertise the benefits to prospective clients. The way it has evolved is what allows it to be emerging. There are many different uses of voice recognition compared to its original creation design. These new variations of voice recognition are what allows Voiceright to keep its competitive edge. Voice recognition is now used to enhance security features, executing spoken commands, and help those with disabilities. Voiceright focuses its resources on the security aspects of voice recognition. The company can make software that is simple to use but highly secure. This is all due to voice recognition and the company would not be thriving or safe without it.

# Explanation of Diction

The audience of the white paper is toward a prospective client who wishes to pursue a course of using voice recognition to enhance the security at their company. This client does not have extensive knowledge of voice recognition and its abilities. The client’s company focuses on creation of mobile and desktop devices. The client’s company needs security for access control within their company and within their devices. Using a formal tone was appropriate for the scenario, as there is no personal relationship between the client and company. No technical language was used regarding the benefits and knowledge of voice recognition because the client does not have a deep understanding of what voice recognition really is. No assumptions of knowledge were made about the client’s understanding of voice recognition. This white paper was written with the intent of targeting an audience with very little knowledge of voice recognition and its advantages.

# References

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