

Abstract

The GuardFile system provides users with a secure and user-friendly platform to store, organize, and manage files in the cloud while maintaining the three pillars of cybersecurity: confidentiality, integrity, and availability. GuardFile employs but is not limited to multi-factor authentication, including password verification, face scanning, and voice recognition, to ensure that only authorized users can access their data. In order to keep users up to date and well-informed about their data, they are notified of account activity through real-time email alerts and detailed audit logs. While other cloud storage applications offer basic security measures, GuardFile distinguishes itself by actively educating users on safe data practices through a security score system. Users are able to utilize this feature by tracking their progress, enhancing their security by opting into additional protective features, which creates stronger and proactive habits in digital security. GuardFile attempts to create this secure, educational environment by combining advanced encryption, multi-factor authentication, and interactive educational tools. GuardFile empowers users not only to protect their data but also to build long-term, safe data management practices.

1.0 Introduction

As the digital world continues to expand, personal data is increasingly vulnerable to cyber threats and keeping that data secure is essential. Too many people participate in this digital world but are woefully unaware how sensitive their data can be and how easily it can be stolen or manipulated if the proper precautions are not taken. GuardFile seeks to address this knowledge gap by offering a secure, user-friendly platform that not only protects data but also educates users on best practices in digital security.

1.1 Background

Cybersecurity is a broad subject that many people know very little about. While most are aware of malware, identity theft, and phishing scams and take steps to avoid these social engineering tactics they often fail to realize how vulnerable their personally identifiable information (PII) truly is. Many users blindly trust websites to protect sensitive information such as names, addresses, and credit card details. While most sites do take measures to keep data secure, GuardFile goes a step further by implementing multiple safeguards and transparently informing customers about how their information is protected. Because of these risks, protecting personal data is not just a technical issue it is a responsibility for every digital user. Knowledge is power, and understanding safe cybersecurity practices empowers individuals to actively safeguard their information and reduce the risk of exploitation.

1.2 Motivation

In today's world, people save almost everything online such as photos, school projects, personal files, and important documents. Many people do not realize how easily this information can be lost or stolen if it is not protected. The motivation for creating GuardFile is to help users feel safe knowing their files are secure and only they can access them. The goal is to make data protection simple while teaching users how to keep their information safe. GuardFile was created because cyberattacks and data leaks are becoming more common and affect many people. Everyone should have an easy way to protect their data and understand how to stay

safe online. By using features like multi-factor authentication, encryption, and real-time alerts, GuardFile helps users keep their information private and manage their digital life with confidence.