

**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS**

**PROJECT TITLE: CURBING RANSOMWARE USING FILE MONITORING APPLICATION**

**BACHELOR OF SCIENCE**

In

**COMPUTER SECURITY AND FORENSICS**

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**Abstract**

Most organizations and consumers all over the world are running losses in hundreds of millions due to the quick emergence of one of the most dangerous cyberthreats which is the ransomware. Ransomware is the technology and modern enabled way of extortion a subject that affects people across the globe on a very large scale. Being the most profitable type of attack with added modules like Ransomware-as-a-service, the number of attackers has significantly increased and cybercriminals with little skills are able to target innocent users in order to make money. Chapter1 of this project gives background information on ransomware attacks and addresses the specific problem of the ransomware attack on the file system. It also contains the objectives of the project, importance of the project as well as its limitations. Chapter 2 of this project gives a brief history of related methods used to curb ransomware attacks, as well as the statistical figures of the impact of the ransomware attacks on the sectors of the economy. In addition motives behind ransomware attacks, types of ransomware families, infection vectors, attack methodologies, anatomy of a ransomware attack, file system activity and the psychological aspect of ransomware are discussed. Chapter3 of this project highlight the methodology used to develop the project and Chapter 4 explains the different system requirements design models used to develop this project. Chapter 5 discusses the findings acquired after the application is implemented. Chapter 6 concludes the project and gives recommendations for future works