

ABSTRACT

Despite the rapid escalation of cyber threats, there has still been little research into the foundations of the subject or methodologies that could serve to guide Information Systems researchers and practitioners who deal with cyber security. In addition, little is known about Crime-as-a-Service (CaaS), a criminal business model that underpins the cybercrime underground. This research gap and the practical cybercrime problems we face have motivated us to investigate the cybercrime underground economy by taking a data analytics approach from a design science perspective. To achieve this goal, we propose (1) a data analysis framework for analyzing the cybercrime underground,(2) CaaS and crime ware definitions, and (3) an associated classification model. In addition, we (4) develop an example application to demonstrate how the proposed framework and classification model could be implemented in practice.

We then use this application to investigate the cybercrime underground economy by analyzing a large dataset obtained from the online hacking community. By taking a design science research approach, this study contributes to the design artifacts, foundations, and methodologies in this area. Moreover, it provides useful practical insights to practitioners by suggesting guidelines as to how governments and organizations in all industries can prepare for attacks by the cybercrime underground underground market where illegal services are provided to help underground buyers conduct cybercrimes, such as attacks, infections, and money laundering in an automated manner.”.

Sood and Enbody have suggested that crimeware marketplaces have three key elements, namely actors (e.g., coders, operators, or buyers), value chains, and modes of operation (e.g., CaaS, pay- per-install, crimeware toolkits, brokerage, or supplying data). Periodic monitoring and analysis of the content of cybercrime marketplaces could help predict future cyber threats.

LIST OF CONTENTS

ABSTRACT	i
LIST OF CONTENTS	ii-iii
LIST OF FIGURES	iv
LIST OF TABLES	v
CHAPTER 1	1
1. INTRODUCTION	1-4
1.0 Overview	1
1.1 Motivation	1
1.2 Objective	2
1.2.1 Advantages	2
1.2.2 Disadvantage	2-3
1.3 Feasibility Study	3-4
CHAPTER 2	5
2. Literature Survey	5-7
2.1 Comparative analysis	6-7
2.2 Results and inference drawn	7
CHAPTER 3	8
Existing and Proposed System	8-9
3.1 Existing System	8
3.2 Proposed System	9
CHAPTER 4	10
System Requirement Specification	10-13
4.1 Fuctional Requirements	10
4.2 Non-Functional Requirements	10-12
4.3 Software and Hardware Requirements	12

4.4 SRS Table	13
CHAPTER 5	14
Architecture	14-16
5.1 Modules	15
5.2Algorithm	16
CHAPTER 6	17
System Design and Implementation	17-18
CHAPTER 7	19
Screen Layout	19-24
CHAPTER 8	25
Database Design	25-32
8.1 E R diagram	25-27
8.2 DataFlow diagram	28-29
8.3 Table Structure	30-32
CHAPTER 9	33
Use Case Diagram	33-36
CHAPTER 10	37
System Test	37-40
CHAPTER 11	41
Limitations and Drawbacks	41
CHAPTER 12	42
Future Work	42-43
CONCLUSION	44
REFERENCES	45

LIST OF FIGURES

Figure 5.0: Architecture Diagram	14
Figure 5.1: Modules for Implementation	15
Figure 6.0: System Design Module	17
Figure 6.1: System design Results	18
Figure 7.0 Screen Layouts	19-24
Figure 8.1 E R Diagrams	25-26
Figure 8.2 DataFlow Diagrams	28-29
Figure 9.0 Use Case Diagram	33
Figure 9.1 Sequence Diagram	34-35
Figure 9.2 Class Diagram	36

LIST OF TABLES

Table 4.3: SRS Table	13
Table 8.3 Table Structures	30-32
Table:Register model	30
Table:Upload model	30-31
Table:Chat model	31
Table:Request model	31
Table:FeedBack model	31-32
Table:User Chat	32
Table:Algorithm model	32
Table 10.0:Test cases	40