

DATA-DRIVEN DECISION SUPPORT FOR OPTIMIZING CYBER FORENSIC INVESTIGATIONS

A Project Report

Submitted by

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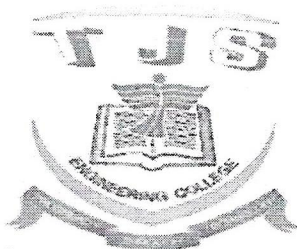
MYLAM SOWMYA

In partial fulfilment for the award of the degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING



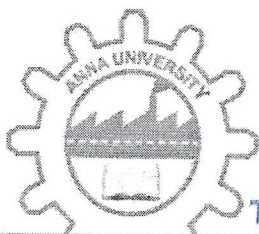
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PERUVOYAL (NEAR KAVARAIPETTAI)

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THIRUVALLUR DISTRICT - 601 206

Approved by AICTE and Affiliated to Anna University, Chennai



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JUNE 2022

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BONAFIDE CERTIFICATE

Certificate that this project report "Data-Driven Decision Support For Optimizing Cyber Forensics Investigations" is the bonafide work of the following students.

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Submitted for viva voce held on 22-06-22 at T.J.S. Engineering College, Peruvoyal.

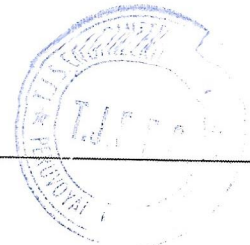
INTERNAL EXAMINER

EXTERNAL EXAMINER

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ABSTRACT

Cyber security threat is offensive action that targets computer network, personal or professional devices by using various methods to alter, steal or destroy data. Cyber forensic explains how a policy became violated and who was responsible for it. Developing policies and procedures that establish the parameters for operation and function is an important phase of creating a computer forensics unit. An effective way to begin this task is to develop a mission statement that incorporates the core functions of the unit, whether those functions include high-technology crime investigations, evidence collection, or forensic analysis. However, Cyber forensic contains steps to investigate or collect the data., Analysis phase will lead to make the decision. It is defined as the processes and tools used in investigations and gathering evidence. Some of the instruction will be provided as a default such as category wise. By Analysing the investigation report, process will be optimized to reduce the investigation process. Staff will give the report daily basis, expert will check and analysis the report to provide the instructions to the staffs. The venture known as "Data-Driven Decision Support for Optimizing Cyber Forensic Investigations" is a web based application. This software provides facility for confirming criminal offenses, Problems, losing individuals to DIG. This software provide facility for reporting online crimes, online complaints, missing persons show criminal list and details on web page. Any number of public can complaint through online. Each user first makes their login to server to share their availability. An effective way to begin this task is to develop a mission statement that incorporates the core functions of the unit, whether those functions include high-technology crime investigations, evidence collection, or forensic analysis. However, Cyber forensic contains steps to investigate or collect the data It is defined as the processes and tools used in investigations and gathering evidence. Some of the instruction will be provided as a default such as category wise. By analysing the investigation report, process will be optimized to reduce the investigation process.

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CS8601

MOBILE COMPUTING

L T P C

3 0 0 3

OBJECTIVES:

- To understand the basic concepts of mobile computing.
- To learn the basics of mobile telecommunication system .
- To be familiar with the network layer protocols and Ad-Hoc networks.
- To know the basis of transport and application layer protocols.
- To gain knowledge about different mobile platforms and application development.

UNIT I	INTRODUCTION	9
Introduction to Mobile Computing - Applications of Mobile Computing- Generations of Mobile Communication Technologies- Multiplexing - Spread spectrum -MAC Protocols - SDMA- TDMA- FDMA- CDMA		
UNIT II	MOBILE TELECOMMUNICATION SYSTEM	9
Introduction to Cellular Systems - GSM - Services & Architecture - Protocols - Connection Establishment - Frequency Allocation - Routing - Mobility Management - Security - GPRS- UMTS - Architecture - Handover - Security		
UNIT III	MOBILE NETWORK LAYER	9
Mobile IP - DHCP - AdHoc- Proactive protocol-DSDV, Reactive Routing - Hybrid routing -ZRP, Multicast Routing- ODMRP, Vehicular Ad Hoc networks(VANET) -MANET Vs VANET - Security.		
UNIT IV	MOBILE TRANSPORT AND APPLICATION LAYER	9
Mobile TCP- WAP - Architecture - WDP - WTLS - WTP -WSP - WAE - WTA Architecture - WML		
UNIT V	MOBILE PLATFORMS AND APPLICATIONS	9
Mobile Device Operating Systems - Special Constraints & Requirements - Commercial Mobile Operating Systems - Software Development Kit: iOS, Android, BlackBerry, Windows Phone - MCommerce - Structure - Pros & Cons - Mobile Payment System - Security Issues		

TOTAL 45 PERIODS

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OUTCOMES:

At the end of the course, the students should be able to:


- Explain the basics of mobile telecommunication systems
- Illustrate the generations of telecommunication systems in wireless networks
- Determine the functionality of MAC, network layer and Identify a routing protocol for a given Ad hoc network
- Explain the functionality of Transport and Application layers
- Develop a mobile application using android/blackberry/ios/Windows SDK

TEXT BOOKS:

1. Lochen Schiller, "Mobile Communications", PHI, Second Edition, 2003.
2. Prasant Kumar Pattnaik, Rajib Mall, "Fundamentals of Mobile Computing", PHILearning Pvt.Ltd, New Delhi - 2012

REFERENCES

1. Dharma Prakash Agarwal, Qing and An Zeng, "Introduction to Wireless and Mobile Systems", Thomson Asia Pvt Ltd, 2005.
2. Uwe Hansmann, Lothar Merk, Martin S. Nicklons and Thomas Stober, "Principles of Mobile Computing", Springer, 2003.
3. William.C.Y.Lee, "Mobile Cellular Telecommunications-Analog and Digital Systems", Second Edition, TataMcGraw Hill Edition, 2006.
4. C.K.Toh, "AdHoc Mobile Wireless Networks", First Edition, Pearson Education, 2002.
5. Android Developers : <http://developer.android.com/index.html>
6. Apple Developer : <https://developer.apple.com/>
7. Windows Phone DevCenter : <http://developer.windowsphone.com>
8. BlackBerry Developer : <http://developer.blackberry.com>



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