

# **DIGITAL FORENSICS TOWARDS SYSTEMATIC CYBER FORENSIC INVESTIGATION APPROACH: The Case of United Republic of Tanzania.**

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## **ABSTRACT**

The purpose of this research were to design and develop a systematic approach that facilitates cyber forensic investigation in the United Republic of Tanzania. Due to the nature of crime committed by using digital or electronic devices, it is very difficult to have a unified Model that can address all the issues that impede investigation in cyber forensic. The modes of crime and cybercrime methods are dynamic and not static hence there is a need to have a customized or simplified model that can address the cyber investigation based on the available technology, infrastructure and expertise.

Two types of data were collected during the dissertation preparations. The first data collection approach involved administering questionnaires to random sample of Law enforcement agencies and Cyber forensic practitioners. The data was then analyzed using both SPSS and Microsoft Excel. The second data collection approach looked into the existing cyber forensic investigation models.

This study assessed surveyed and identified processes of existing cyber forensic investigation models and proposes a customized systematic cyber forensic investigation approach. The customized systematic cyber forensic approach consists of three processes namely Governance, Training and Investigation process. Governance and training are branded as proactive cyber forensic approach and investigation process has been branded as Reactive cyber forensic approach in which they form a Systematic Cyber Forensic Investigation Approach (SCFIA).

To address the issue of preserving the integrity of digital evidence, this dissertation report improves upon other digital forensic investigation model by creating a systematic approach for Cyber Forensic Investigation (SCFA) a model that results in an improvement in the investigation process as well as security mechanism and guidelines.

**Master in Computational Science and Engineering.**