

Amrita School of Computing, Chennai

*20CYS311 -Cyber Forensics*

**Capstone Project Title:** Digiforensics: A Multi-Tool Solution for Cyber Investigation and Analysis

**Abstract:**

Cybercrime has become a global threat to individuals, organizations, and governments. Cyber forensic investigation is an essential tool in combating cybercrime. This project aims to provide tools of cyber forensic investigations at one place and explore the latest techniques used in cyber forensic investigations.

Various tools that are used in many different stages of a cyber forensic investigation, including identification, preservation, collection, analysis, and reporting are very essential and made available in project.. The initial idea of the tool is to provide easy access for various forensics tools at a single place which helps the investigators to work on the crime scene flawlessly. Python is used to build this application as it is the programming language that is simple to code and debug. Tkinter library is the face of the project which helps to build GUI that is user friendly and makes all the tools available at a single place. The algorithms that work for this tools are also built using python. Cyber forensic tools are essential for a forensic investigator. This project isn’t limited to cyber forensics tools but also includes many different types of cryptography algorithms, blogs on cyber security essentials, and many more tools and information regarding cyber security which gives insights about many different terms. Cyber forensics follows many traditional ways to achieve the requirements for securing the integrity and confidentiality of the evidence produced from the crime. Hashing algorithms are used for integrity check. Steganography techniques are used to hide and extract text data hidden in an image.

***Keywords:*** *Steganography, Cyber Crime, Cyber Forensics, Hashing.*

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