Computer Forensics

By Jaye Engelhardt

What is Computer Forensics?

- Computer forensics is also referred to as:
  - Computer forensic analysis
  - Digital discovery
  - Data recovery
  - Computer analysis
- Computer forensics is the collection, preservation, analysis, and presentation of computer-related evidence.

Who uses it?

- Computer forensics engineers extract evidence in a legal manner, to ensure it is available for court proceedings.

  - There are 5 important steps for an effective investigation
    - Policy and Procedure Development
    - Evidence Assessment
    - Evidence Acquisition
    - Evidence Examination
    - Documenting and Reporting

Skills Needed

- Knowledge of
  - Programming
  - Operating Systems
  - Malware Types
  - Law and Criminal Investigation
- Code of Ethics
- Critical and analytical thinking
- Communication Skills
- Attention to Details

Recommended Certifications

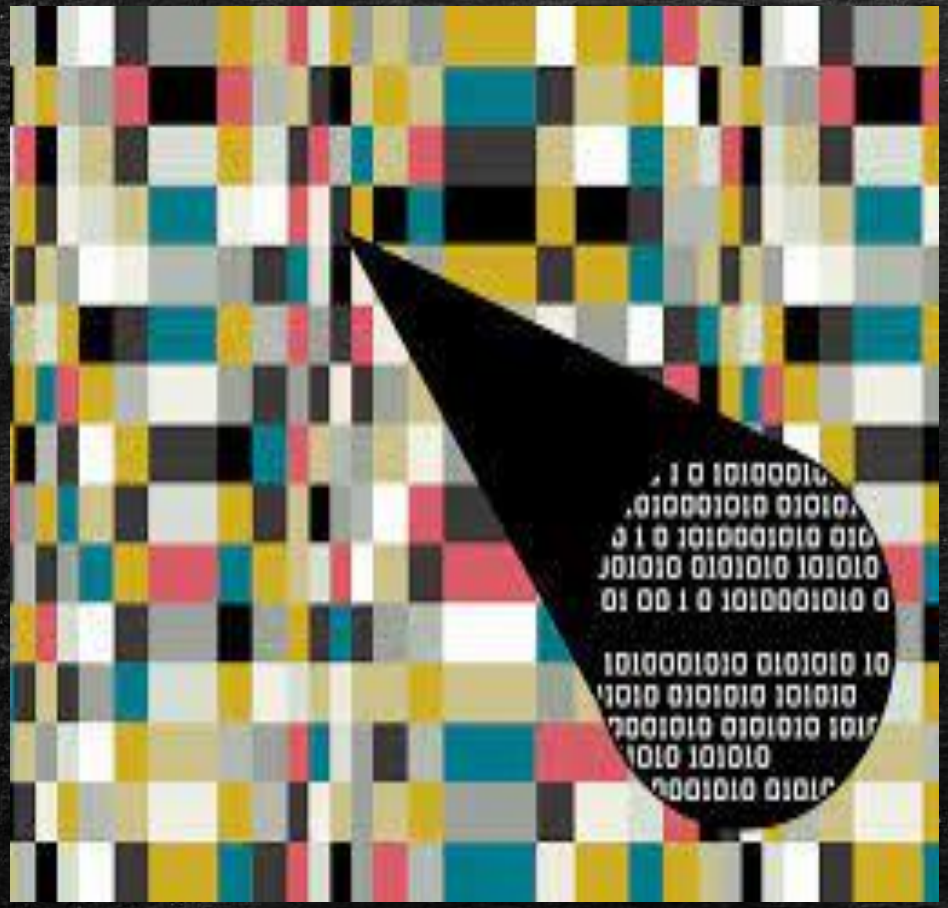
- There are not many institutions that have computer forensics degrees however there are certifications you can obtain.
  - EnCase Certified Examiner
  - Certified Computer Examiner
  - Certified Computer Forensic Examiner
  - GIAC Certified Forensic Examiner
  - Cyber Security Forensic Analyst
- You can pair these certifications with a degree in computer science or cybersecurity and criminal justice and be on the path to becoming a computer forensics engineer.

Types of Computer Forensics

Computer forensics can be broken down into different groups.

- Operating System Forensics
- File System Forensics
- Live Memory Forensics
- Web Forensics
- Email Forensics
- Network Forensics
- Multimedia Forensics
- Others

Stenography



- The technique of concealing data within another message to avoid detection.
  - Derivied from 2 Greek words “steganos” meaning hidden or covered and “graph” meaning to write
- Can be used to hide most types of data including text, video, images, and audio.

Tools Available

- Autopsy and Sleuth Kit
- FTK Imager
- Registry Recon
- Cellebrite UFED
- Wireshark
- Faraday Shielding Bag

Private companies with their own labs

- Mastercard
- Target
- American Express
- Walmart
- Intel

Any Questions?

Resources

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Resources

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