

# Cybersecurity Project Report

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## Title:

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**Mini Threat Detector**  
*A Python CLI Tool for File Integrity & Phishing Detection*

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## Submitted by:

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**Jitender**  
Self-Directed Internship – June 2025

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## Abstract:

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The **Mini Threat Detector** is a Python-based command-line tool designed for educational cybersecurity purposes. It provides two core functionalities:

1. **File Integrity Checking** using SHA256 hashing
2. **Phishing URL Detection** using Regular Expressions

The goal of this project is to help understand fundamental cybersecurity concepts through practical implementation.

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## Tools & Technologies Used:

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- Python 3
  - SHA256 Hashing
  - Regex (Regular Expressions)
  - Command Line Interface (CLI)
  - Git + GitHub for version control
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## Modules Implemented:

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### 1. File Integrity Checker:

- Generates a SHA256 hash of a file.
- Compares it with a known good hash to detect tampering.

### 2. Phishing Detector:

- Uses regular expressions to analyze URLs or messages.
- Identifies patterns commonly used in phishing attempts.

### 3. Unified CLI:

- A `main.py` script that acts as the user interface.
  - Offers a menu to select and run the two modules.
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## Code Overview:

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- `main.py` is the entry point and contains a simple text menu.
- Users can:
  - Choose between integrity check and phishing scan
  - Input file path or a message
  - View output in the terminal

### Libraries Used:

- `hashlib` for hashing files
  - `re` for regex-based phishing detection
  - `os` for file handling
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## Outcome of the Internship:

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- Developed a working cybersecurity tool from scratch.
  - Applied Python programming to real-world threat detection scenarios.
  - Learned and implemented SHA256, Regex, and basic CLI logic.
  - Gained hands-on experience with GitHub and project documentation.
  - Built a portfolio-ready project showcasing initiative and technical skill.
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## GitHub Project Link:

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🔗 <https://github.com/Jitte-hacker>

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## Developer Info:

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**Name:** Jitender  
**Role:** Cybersecurity Enthusiast  
**Year:** 1st-Year Student (2025)

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## Screenshots (Optional):

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You may add terminal screenshots of your tool's output here to enhance the presentation.

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