

Ransomware Detection Tool – A Tool that Scans Files and Detects Ransomware Behavior

The **Ransomware Detection Tool** is an **AI-powered security solution** that monitors **file activity** and **detects ransomware behavior** in real time.

The system analyzes file access patterns, detects **encryption anomalies, unauthorized file modifications, and suspicious process executions**, and alerts users before damage occurs. It employs **machine learning (Random Forest, LSTM)** and **behavioral analysis** for high detection accuracy.

The backend is developed using **Python with TensorFlow**, and the tool integrates with **operating systems as a background security service**.

By **preventing unauthorized encryption**, this project safeguards **user data from ransomware threats**.