

Network Packet Sniffer with Anomaly Alert System

Project Overview

This project captures live network packets, detects anomalies, logs them in a database, and visualizes traffic using a GUI.

Folder Structure

packetsniffer/

```
|  
|   main.py  
|   gui.py  
|   sniffer.py  
|   analyzer.py  
|   db.py  
|   alert.py  
|   requirements.txt  
|  
+-- packets.db
```

Requirements

Python 3.8+

Packages:

scapy
matplotlib
tk
sqlite3

Setup Instructions

Install dependencies:

pip install scapy

GUI Window:

Start Sniffer → begins live packet capture

Stop Sniffer → stops GUI logic

Live bar graph:

Blue bars → normal IPs

Red bars → suspicious IPs (alerts triggered)

Database and Logs

Database: packets.db stores all captured packets.

Alerts log: alerts.log contains all triggered alerts.