

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.