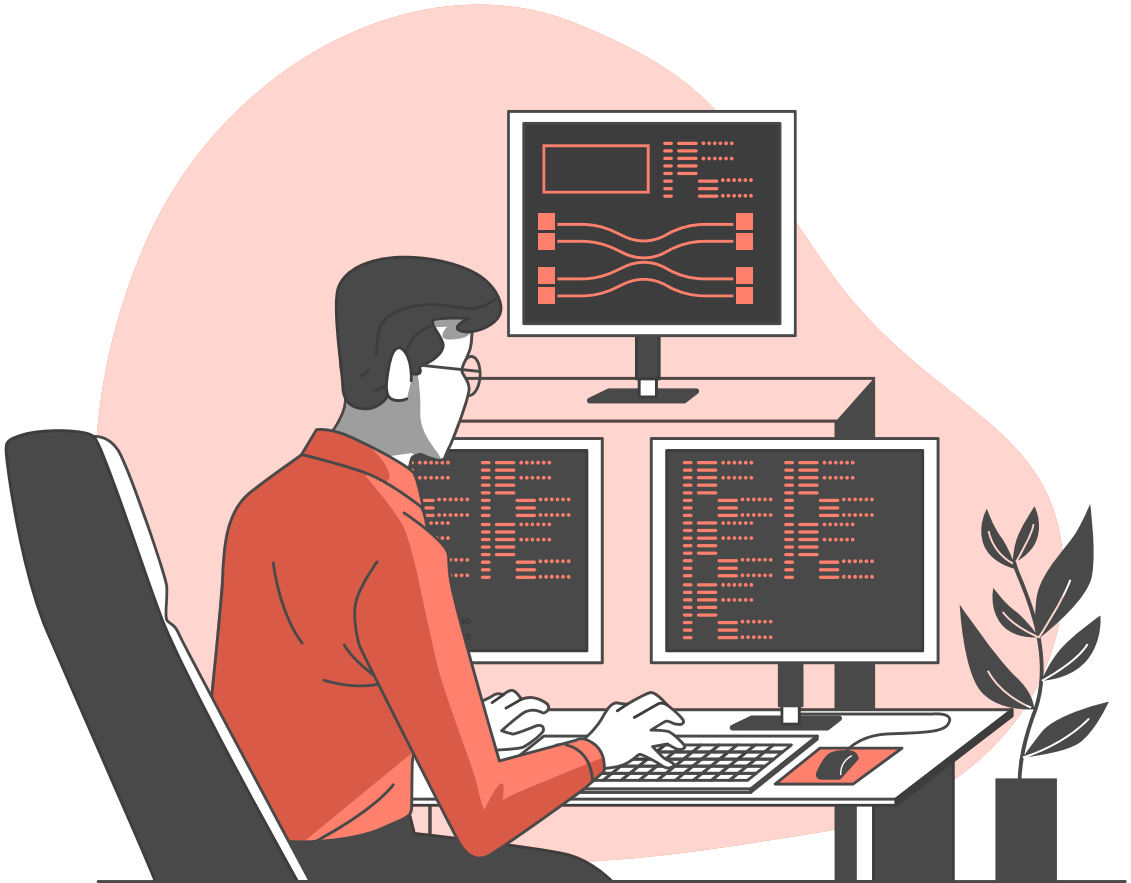

Wireless Network Security Scanner

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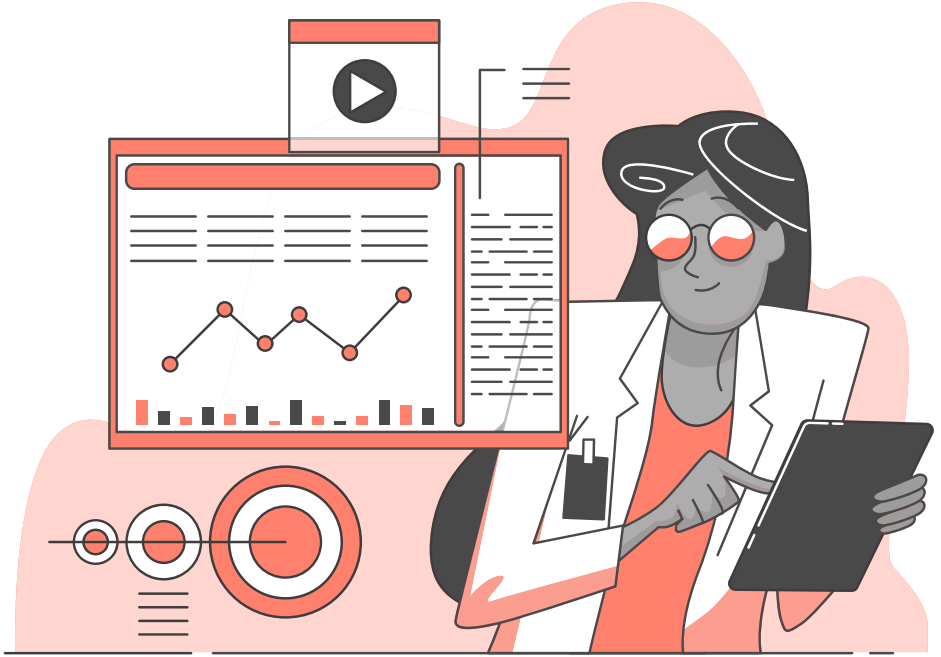


01
Introduction

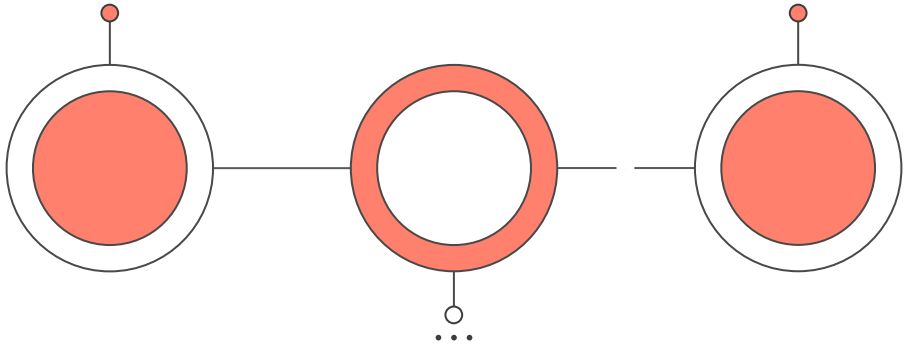
We present ?

Our project is a Python-based Wireless Network Security Scanner that analyzes nearby Wi-Fi networks and evaluates their security level.

Purpose ?

To increase awareness about wireless security.

To show how Python can be used for cybersecurity analysis.



To help users identify weak or unsafe networks.

02
Technologies Used

Tools & Programming Language

Python 3

Main programming language

...

subprocess module

Executes Windows commands

...

Regular Expressions

Extracts SSID and encryption type

...

Why these technologies ?

01 Python is simple and widely used in cybersecurity

02 Netsh works on any Windows device

03 No need for Linux, drivers, or special tools

04 Lightweight and easy to run on any computer

03

How It Works ?

System Workflow

1. The Python script runs the Windows command to list all Wi-Fi networks.
2. It captures the output from the system.
3. It extracts important details :
    - SSID (network name)
    - Encryption type (Open, WEP, WPA, WPA2, WPA3)
4. The program analyzes each network’s security level.
5. It prints a clean, readable security report.

04

Security Interpretation & Benefits

Security Interpretation

Open → High Risk

WEP → Very Weak

WPA → Medium

WPA2 → Strong if password is strong

WPA3 → Excellent security

Benefits

1. Helps users check Wi-Fi safety quickly
2. Educates people about weak encryptions
3. Useful for IT students and cybersecurity beginners
4. Completely safe and legal — no packet capturing

Thanks for your attention