

Supervised By
Prof. Md. Zulfiqar Hafiz

DROID SCANNER

**AN APP SECURITY MANAGEMENT
SYSTEM**

Presented by:
Salsabila Zaman 1443
Md. Shaikhul Islam 1438

ABOUT US

- Droid Scanner: Android app security tool
- Scan Modes: Full Scan (all apps) | Quick Scan (specific app)
- Dashboard: Profiles, past scans, blacklist/whitelist
- Malicious App Detection: Threat scanning
- APK Extraction: Save & analyze APK files
- User Database: Secure scan storage
- Developer Dashboard: Reports & permission analysis
- Security Reports: Permissions, intents, risks
- Centralized Database: Tracks scans & security records



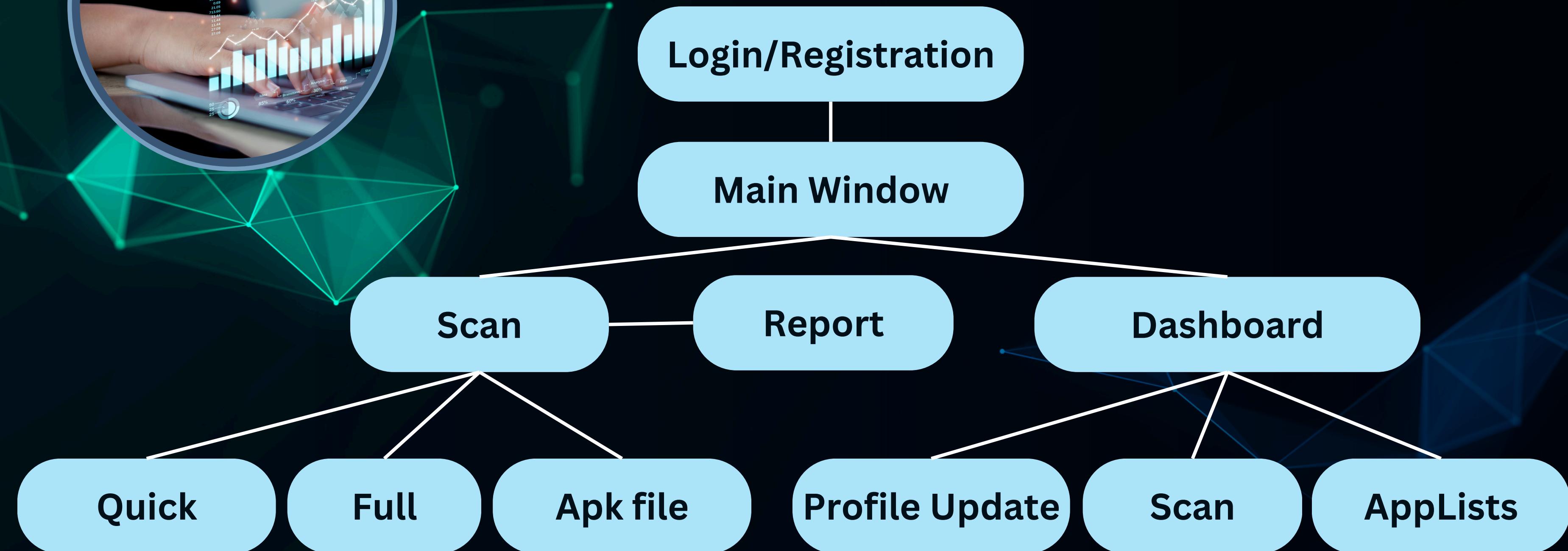
MOTIVATION

- A simple and powerful security solution.
- User-friendly desktop application for analyzing APK files.
- Offers comprehensive device scans and quick APK analysis.
- Assists Android developers in performing pre-release security checks.
- Combines advanced machine learning with an intuitive design.
- Aims to create a safer digital environment for everyone.

Why Choose Droid Scanner?

- **Achieves High Accuracy with Fewer Features:** While research models use thousands of features, Droid Scanner achieves 94% accuracy with just 210 key permissions and intents.
- **Faster and More Efficient:** No deep learning dependencies → Runs on any device, no need for expensive hardware.
- **Lightweight Database:** SQLite-based database ensures quick lookups and fast classification.
- **More Transparent and Explainable:** Unlike research models that provide a black-box prediction, Droid Scanner shows the extracted permissions and manifest file, helping users understand why an app is classified as malicious.
- **Real-Time Ready & Device Scanning (Future Update):** While research models focus on batch processing, Droid Scanner provides instant results and will support real-time device scanning.

PROCESS



CHALLENGES

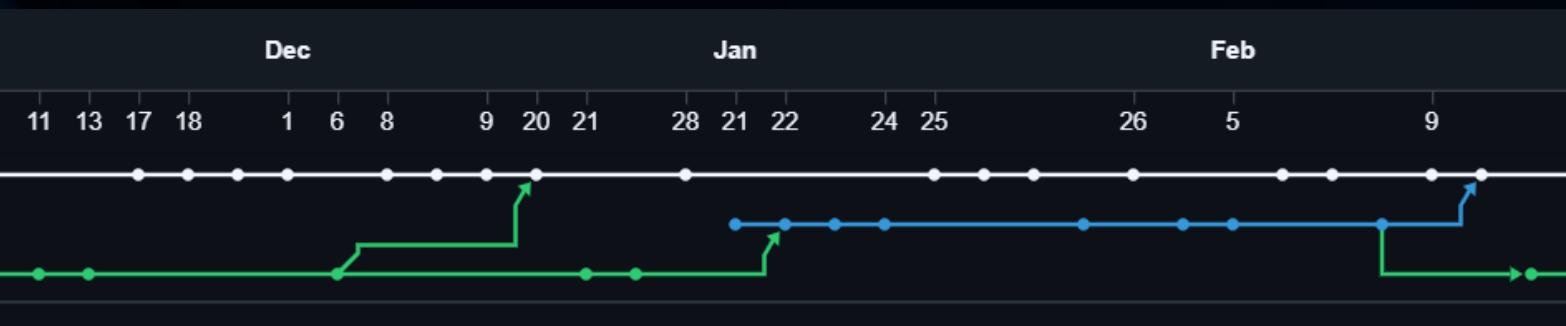
- Extracting Features from APK Files
- Training & Optimizing the Machine Learning Model
- Making Large-Scale Scans Efficient
- Ensuring Secure Data Storage & Privacy
- Designing a Smart Whitelist & Blacklist System
- Building a User-Friendly PyQt5 Interface

FUTURE SCOPE

- Expand behavior analysis to include app network requests and hardware interactions.
- Enrich the dataset with more permissions, intents, and behaviors.
- Implement real-time scanning for instant threat detection during app installation and updates.
- Keep the database updated with the latest security features as the Android ecosystem evolves.
- Features an intuitive interface and an efficient machine learning model for accurate classification.
- Aims to help users maintain strong mobile security standards.
- Continual improvements will ensure better protection against evolving mobile threats.



UNITY AND WORK



WHERE TO FIND DROID SCANNER



Application Link



Github Repository



Documentation



THANK YOU!

FOR YOUR ATTENTION