ANTIVIRUS AI BASED THREAT DETECTION

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ABSTRACT

This project presents a lightweight, offline antivirus tool developed for Windows systems. It combines signature-based detection with AI-assisted behavioral analysis to identify and manage threats effectively. Designed with modularity and transparency, the tool allows users to scan directories, receive alerts, and quarantine or remove malicious files. As an open-source product, it lays a foundation for future enhancements while remaining accessible for use and further development.

INTRODUCTION

- Lightweight, offline antivirus tool for Windows
- Combines signature detection with AI-based analysis
- Focused on user control, modular design, and transparent logging

PROBLEM STATEMENT

- Proprietary antivirus tools limit transparency, flexibility, and affordability
- Freemium solutions restrict access to core features like quarantine and real-time detection
- A gap exists for a modular, offline antivirus with integrated signature and AI-based threat detection

SOLUTION

- Lightweight antivirus tool designed for offline Windows use
- Detects threats using both signatures and AI-based analysis
- Lets users review, quarantine, or remove threats with full control.

RESOURCES

GitHub, AI, MinGW w64, C, VS Code

ARCHITECTURE DAIGRAM

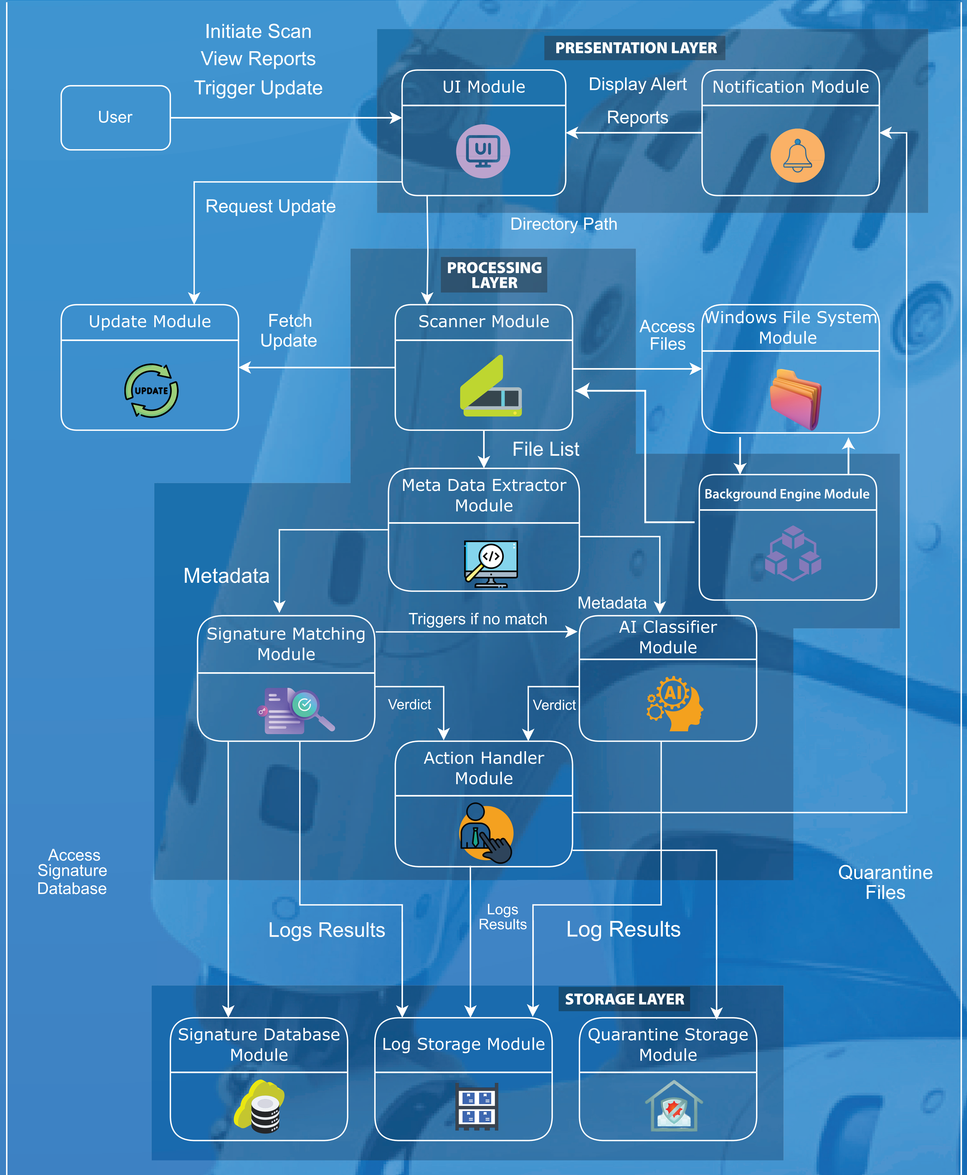

IMAGE USED REFERENCE

https://png.pngtree.com/png-clipart/20240509/original/pntree-ai-robot-thinking-3d-pic-png-i age_15048295.png

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