Guardian Mode: The AI-Powered Chrome Extension for Ethical Browsing

Project Overview

Guardian Mode is a real-time Chrome extension built to detect and block adult, inappropriate, or exploitative content before it loads. It serves as a digital shield for kids, teens, students, and even adults who seek a safer, distraction-free, and ethical online experience.

Purpose: Why I Built Guardian Mode

"One click can change a life — sometimes for the worse."

We live in a digital world where unsafe and exploitative content is often just one search away. Millions of users, especially minors, fall into online traps that promote harmful content and addiction.

Big tech has had the power to protect users for years but has failed to act responsibly.

So I did.

I created Guardian Mode not to judge, but to protect.

To be the line of defense when no one else is.

Features

Feature	Description
Real-time Keyword Blocking	Scans page content and blocks pages with adult or harmful terms
Smart Redirection	Instantly redirects blocked pages to a calming, educational warning.html
Privacy First	No user tracking, no history saved, local filtering only
Toggle UI	Simple popup interface to enable/disable Guardian Mode
Block Stats	Displays blocked attempts in current session
Strict Mode (Coming Soon)	For use in schools, families, shared computers
TensorFlow.js Image Detection (Planned)	AI-based image scan before content loads
Domain Reporting & Blacklisting (Planned)	Users can report domains, improve filtering

User Experience Walkthrough

1. Install Guardian Mode from **GitHub**
2. Enable the toggle in the popup UI
3. Search or open a page with inappropriate keywords/content
4. Guardian Mode intercepts, scans, and blocks the site before it fully loads
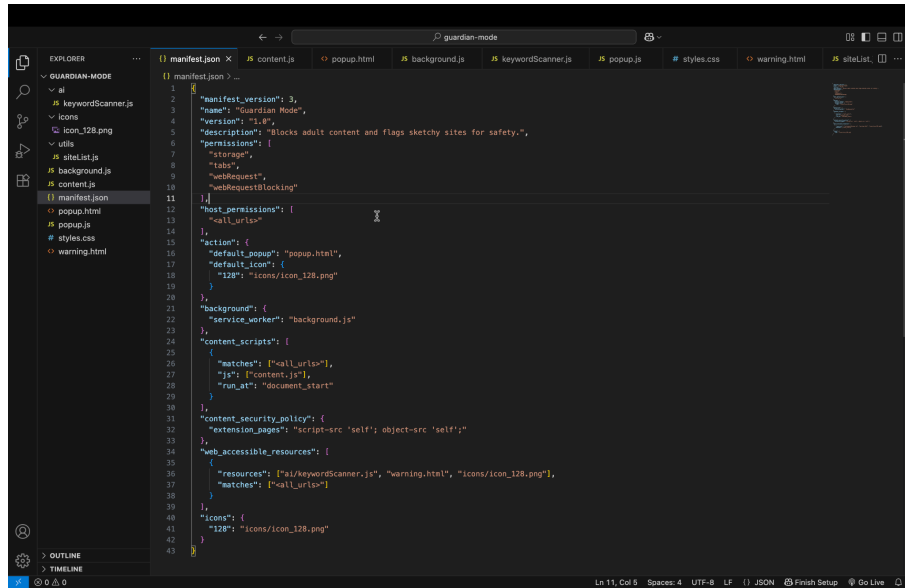5. User is redirected to a warning.html page:

   "This page was blocked for your safety. You are worth more than an algorithm's trap."

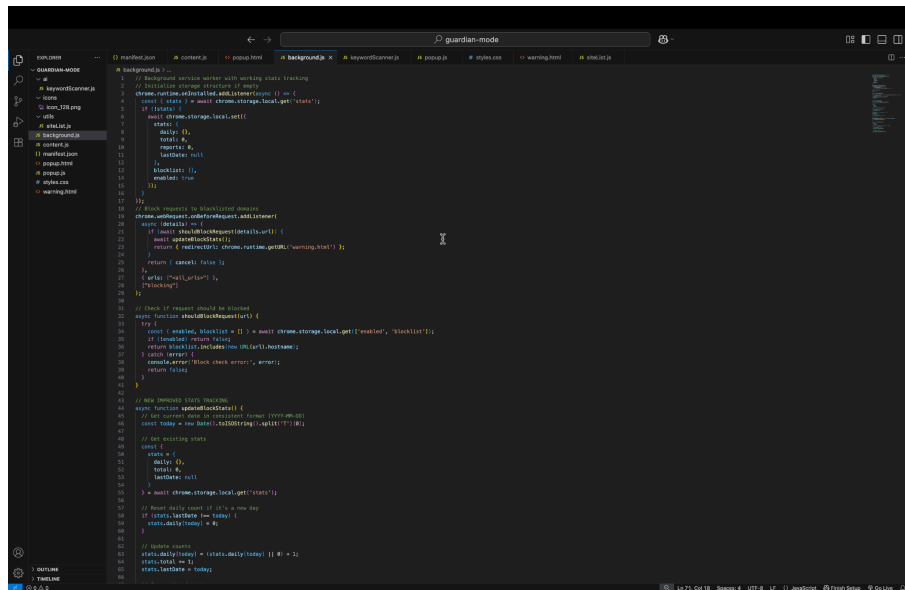6. Stats update in popup. Peace of mind restored.

Technical Stack

- **Manifest V3** — For Chrome extension setup

  (Defines extension permissions, background and content script access.)
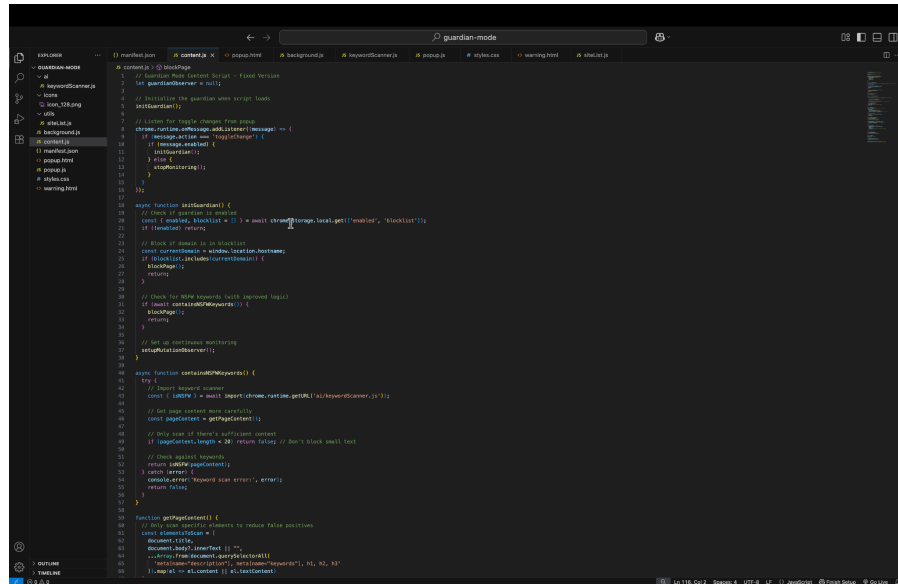

- **background.js** — Handles event-based tab navigation, filters URLs

  (Listens for tab updates and blocks navigation if risky keywords are detected in URL.)
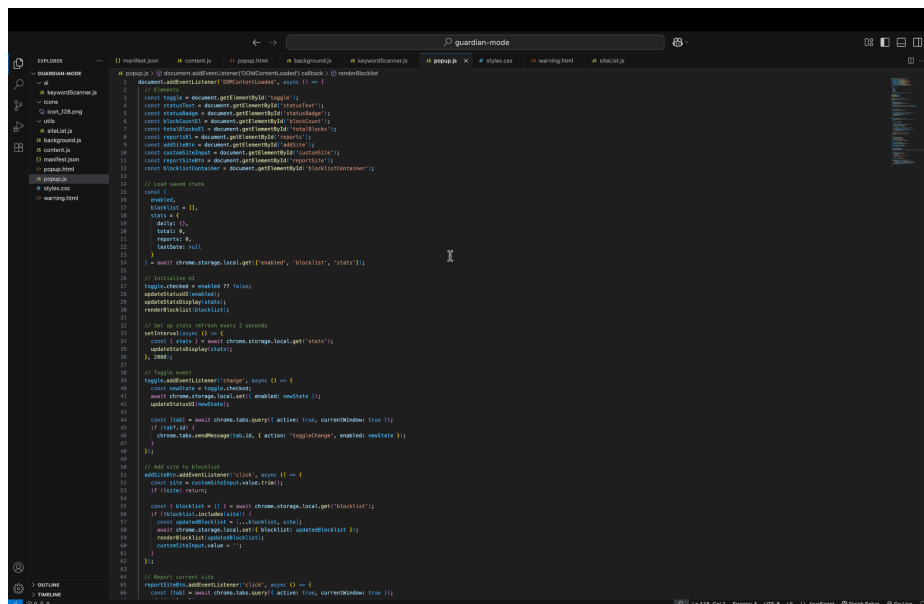
- **content.js** — Scans DOM for harmful text patterns

(Injects into each webpage, checks page content for explicit keywords and triggers redirection.)

- **popup.html / popup.js** — Clean UI with toggle & stats

(Allows users to turn Guardian Mode on/off and view number of blocked sites in session.)

- **warning.html** — Redirect landing page with awareness message

  (Simple HTML/CSS page that educates users on why the site was blocked.)

- **Local Storage** — For storing block count and settings

  (Saves toggle state and blocked site counter using Chrome local storage.)

Optional:

- Future AI image scanning via TensorFlow.js
- Option to integrate with Google Safe Browsing API (if needed)

Vision: What's Next

Guardian Mode is just the beginning.

I want to:

- Build a Parental Dashboard with PIN-protected settings
- Launch School Edition for shared Chromebooks
- Add regional language support for wider accessibility
- Release a mobile browser plugin for Android/iOS
- Partner with NGOs for digital safety education
- Host user-reported AI training feedback loops

Emotional Note

"I didn't build this for a trophy. I built it because someone had to. Because if even one kid, one teen, one person avoids getting trapped in toxic content because of this extension — then it's already a win."

Links

- GitHub Repo: https://github.com/Luciferjimmy/guardian-mode-chrome-extension/tree/main
- Demo Video: https://youtu.be/XI-poAjGeiM?si=1-QdP8pRUgRiuKj5
- Submission Page: https://devpost.com/ragineyesh-singh-as3549?ref_content=user-portfolio&ref_feature=portfolio&ref_medium=global-nav
- Blog Post: https://medium.com/@abhinaw00singh

Closing Line

Guardian Mode isn't surveillance. It's protection.

It doesn't control you. It frees you.

In a world that profits from your clicks, Guardian Mode is your silent shield.