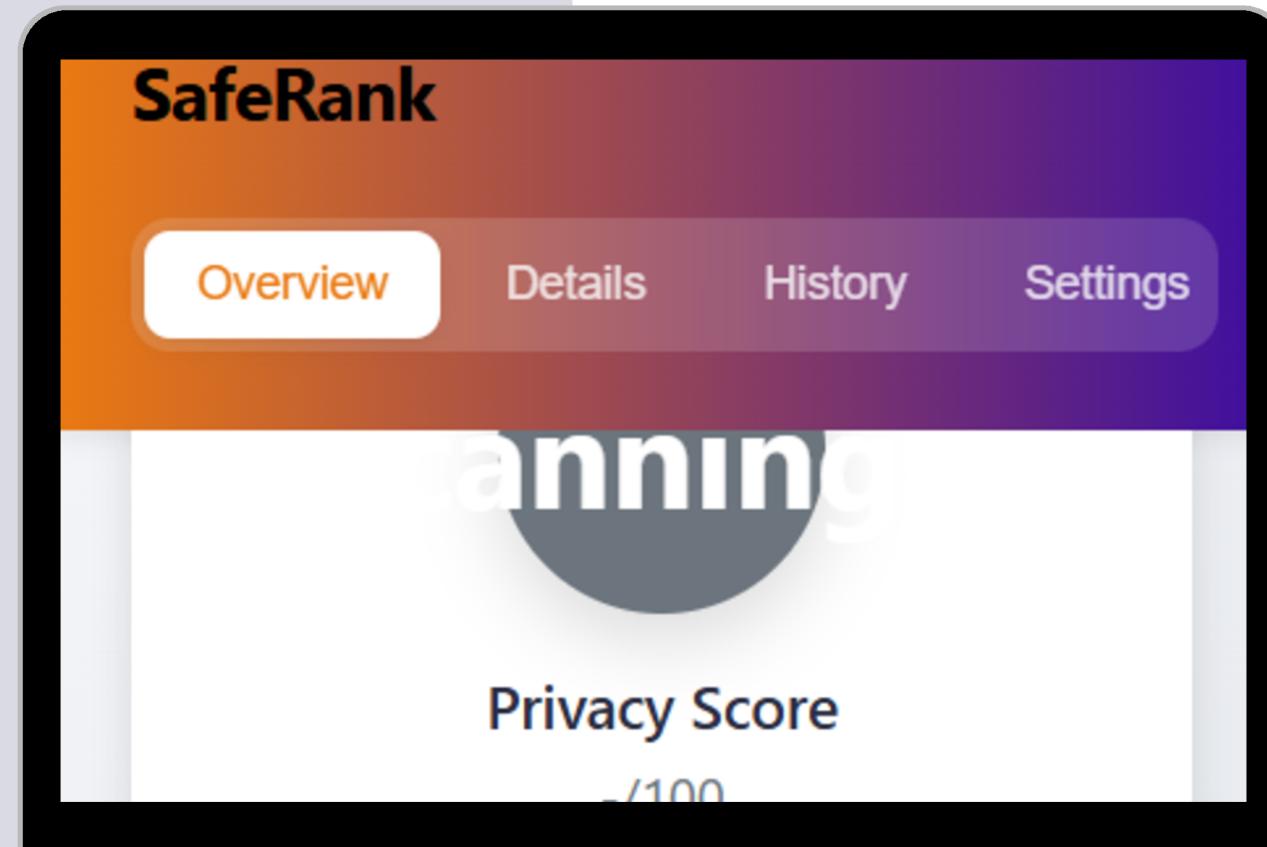


SafeRank



Chrome Extension



WOMEN SAFETY

Problem Statement

The Challenge Women Face Online



- Targeted harassment & stalking due to tracking-based ads.
- Invasive trackers collect browsing history, preferences, and sensitive information.
- Women searching for health, safety, or social issues are at risk of exposure and profiling.
- Current privacy tools are too technical, confusing, or lack awareness features.

Why It Matters

Online tracking enables digital violence (e.g., stalkers using data trails).

Privacy breaches amplify vulnerability in social and professional spaces.

Women deserve equal access to safe digital environments.

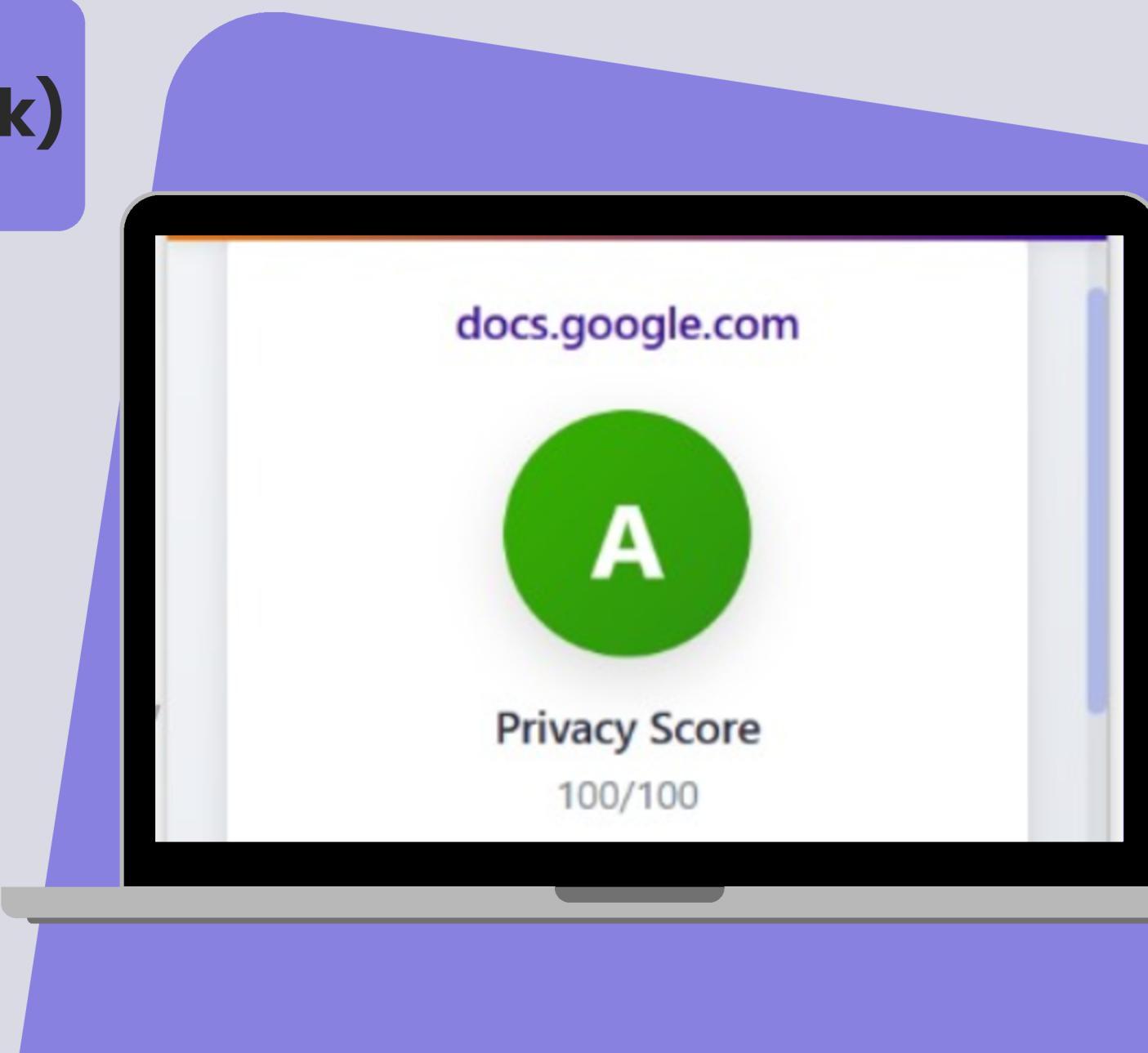
Building awareness of trackers empowers informed decisions.



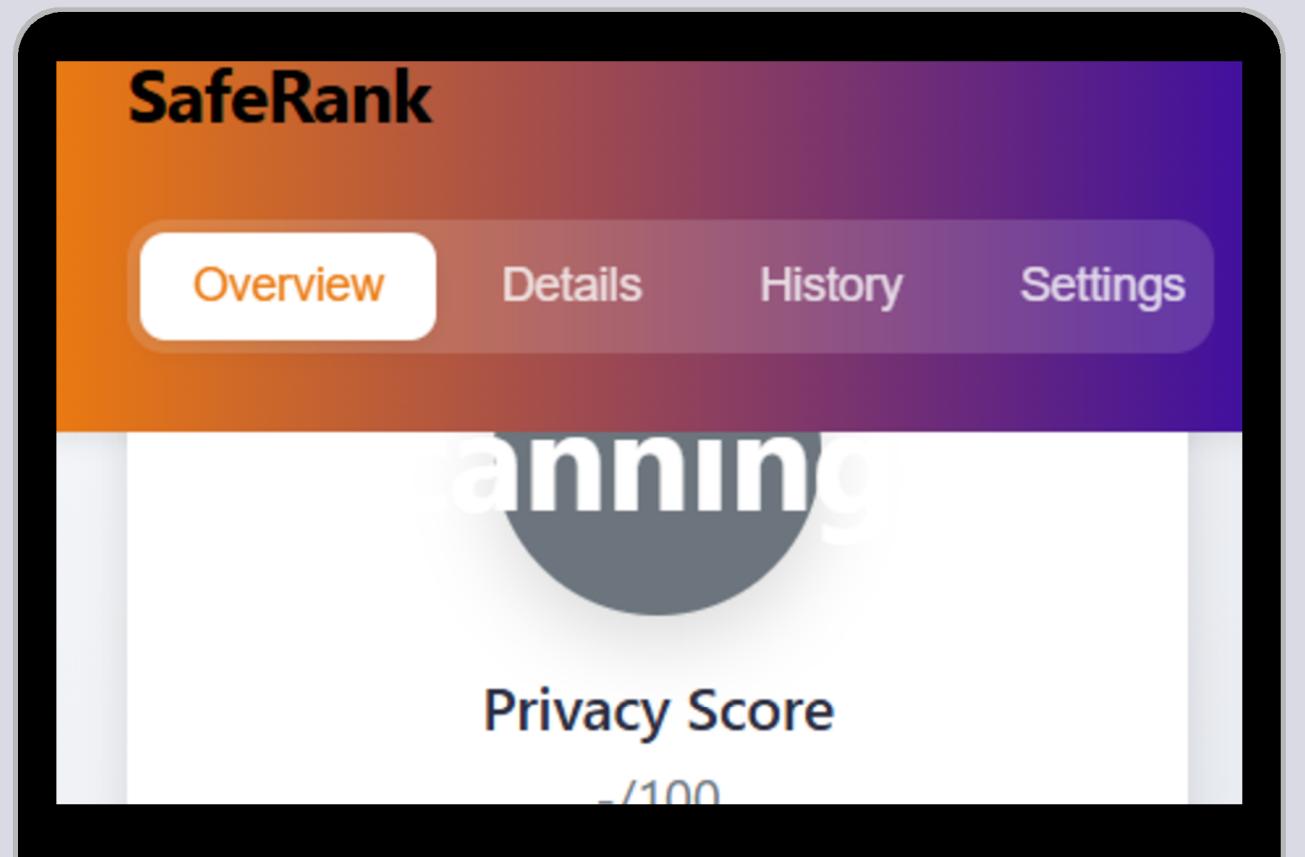
Our Solution

Privacy Score Analyzer – Chrome Extension (**SafeRank**)

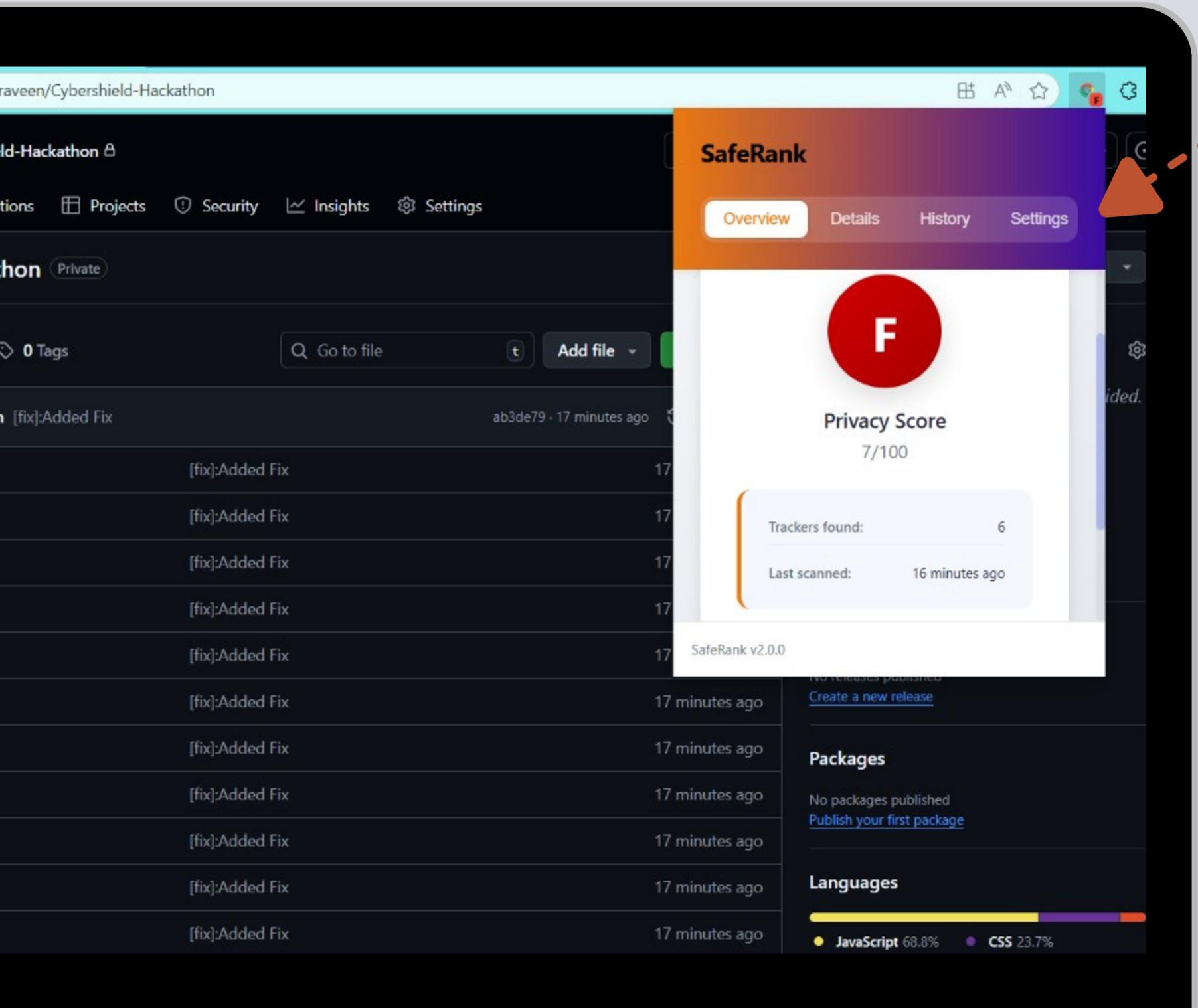
- Automatically scans websites for trackers, cookies, fingerprinting.
- Assigns a clear A–F privacy grade.
- Gives users control and awareness about where they browse.



Extension's Main Features



- 1**  **Comprehensive Tracker Detection**
HTML, JS, cookies, localStorage, fingerprinting.
- 2** **Privacy Scoring System**
Weighted, color-coded, easy to interpret.
- 3** **User-Friendly Interface**
Quick overview, detailed breakdown, history log.
- 4** **Real-Time Badge Display**
Shows privacy score on the extension icon.
- 5**  **Privacy-First Design**
Works 100% locally → No data leaves the browser.
- 6** **Fast Response Time**
The responsive Time is 20ms which is really fast and quick.



● **Privacy Score** – Scans all the trackers of the website and estimate a score.

● **Auto Tracker Block** – Block all the known trackers make the surf private and secure.

● **Details** – Details about all the tracker in the website

● **AutoScanning** – Uses shodan API internally to check is the website is a phishing website.

● **Request and Redirect AutoBlock** – If the website is fishy, Extension will restrict the user from accessing the website



Mockups

A screenshot of the SafeRank extension interface in a browser window. The title bar says "SafeRank". Below it is a navigation bar with tabs: Overview (disabled), Details (highlighted), History, and Settings. The main content area is titled "Detected Trackers" and shows a list of three trackers: LocalStorage Tracker, Potential Fingerprinting, and another Potential Fingerprinting entry. Each entry includes a detection method, a snippet of code, and a "Details" button. A message at the bottom says "6 trackers found".

SafeRank

Overview Details History Settings

Detected Trackers

LocalStorage Tracker Detection method: LocalStorage (ref-
selector:HarshitaJaiswal5/payment_ga
...)

Potential Fingerprinting Detection method: Browser
API (Canvas API)

Potential Fingerprinting Detection method: Browser
API (Canvas API)

6 trackers found

SafeRank v2.0.0

A screenshot of the SafeRank extension interface in a browser window. The title bar says "SafeRank". Below it is a navigation bar with tabs: Overview, Details, History (highlighted), and Settings. The main content area shows a history of tracker detections across four websites: www.geeksforgeeks.org, academy.bytecamp.in, mail.google.com, and www.tiktok.com. Each entry includes the number of trackers, the last visit time, and a color-coded badge (F for both geeksforgeeks and bytecamp, A for both google and tiktok).

SafeRank

Overview Details History Settings

www.geeksforgeeks.org 13 trackers • Last visit: 1 minute ago F

academy.bytecamp.in 6 trackers • Last visit: 2 minutes ago F

mail.google.com 0 trackers • Last visit: 2 minutes ago A

www.tiktok.com 0 trackers • Last visit: 3 minutes ago A

SafeRank v2.0.0

A screenshot of the SafeRank extension interface in a browser window. The title bar says "SafeRank". Below it is a navigation bar with tabs: Overview, Details, History, and Settings (highlighted). The main content area is titled "Settings" and contains three toggle switches: "Enable Badge Display" (on), "Notifications for Poor Scores" (on), and "Auto-Scan on Page Load" (on). A message at the bottom says "SafeRank v2.0.0".

SafeRank

Overview Details History Settings

Settings

Enable Badge Display

Notifications for Poor Scores

Auto-Scan on Page Load

SafeRank v2.0.0



Demo Flow

- Open any website (eg. a shopping site).
- Click on the extension icon.
- See privacy grade instantly (A–F).
- Explore details: trackers, cookies, fingerprinting.
- Compare scores across browsing history.

A screenshot of the SafeRank extension interface. At the top, there are four tabs: "Overview" (highlighted in orange), "Details", "History", and "Settings". Below the tabs, the URL "docs.google.com" is visible. On the right side, there is a large green circle with the letter "A" and the text "Privacy Score 100/100". On the left side, there is a smartphone icon displaying the same SafeRank interface, but with a red circle containing the letter "F" and the text "Privacy Score 7/100". Below the phone icon, it says "Trackers found: 6".

SafeRank

Overview Details History Settings

docs.google.com

A

Privacy Score
100/100

SafeRank

Overview Details History Settings

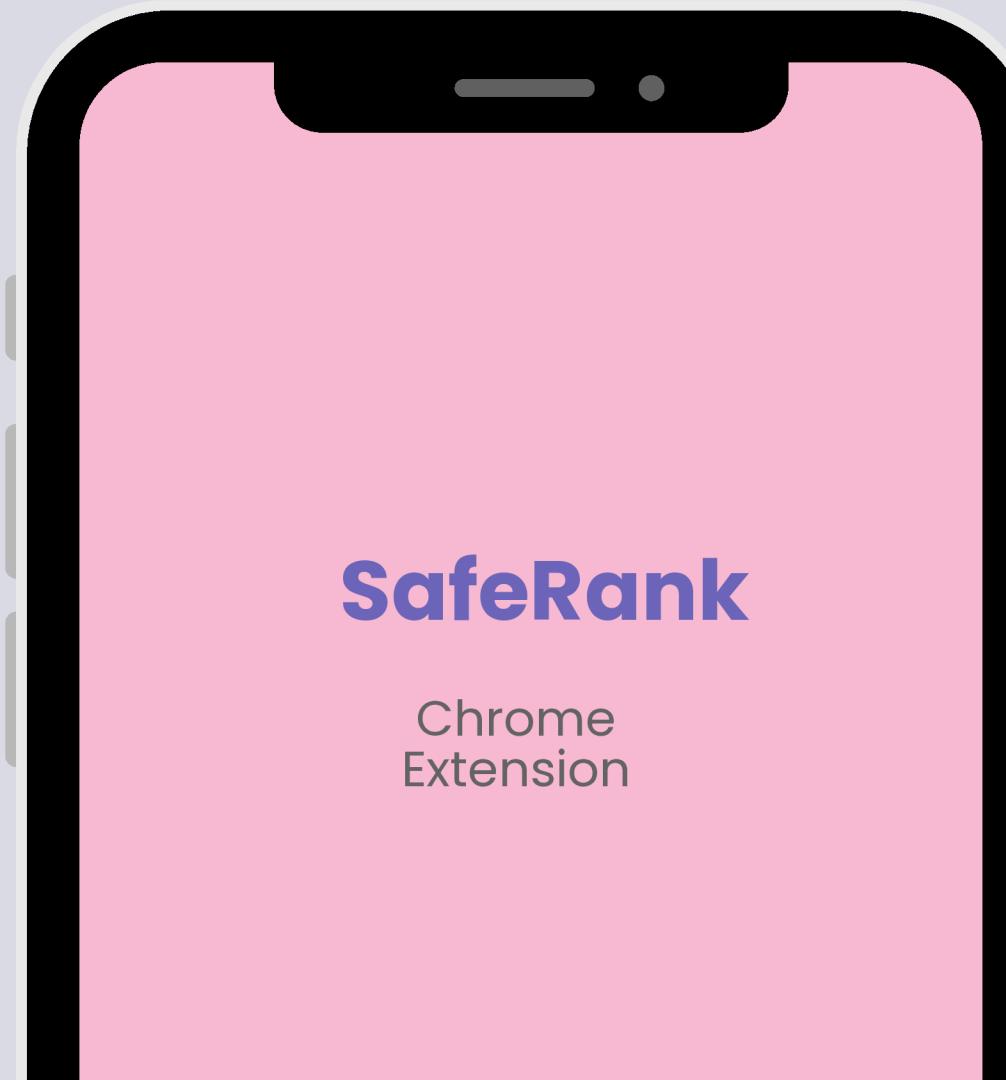
F

Privacy Score
7/100

Trackers found: 6

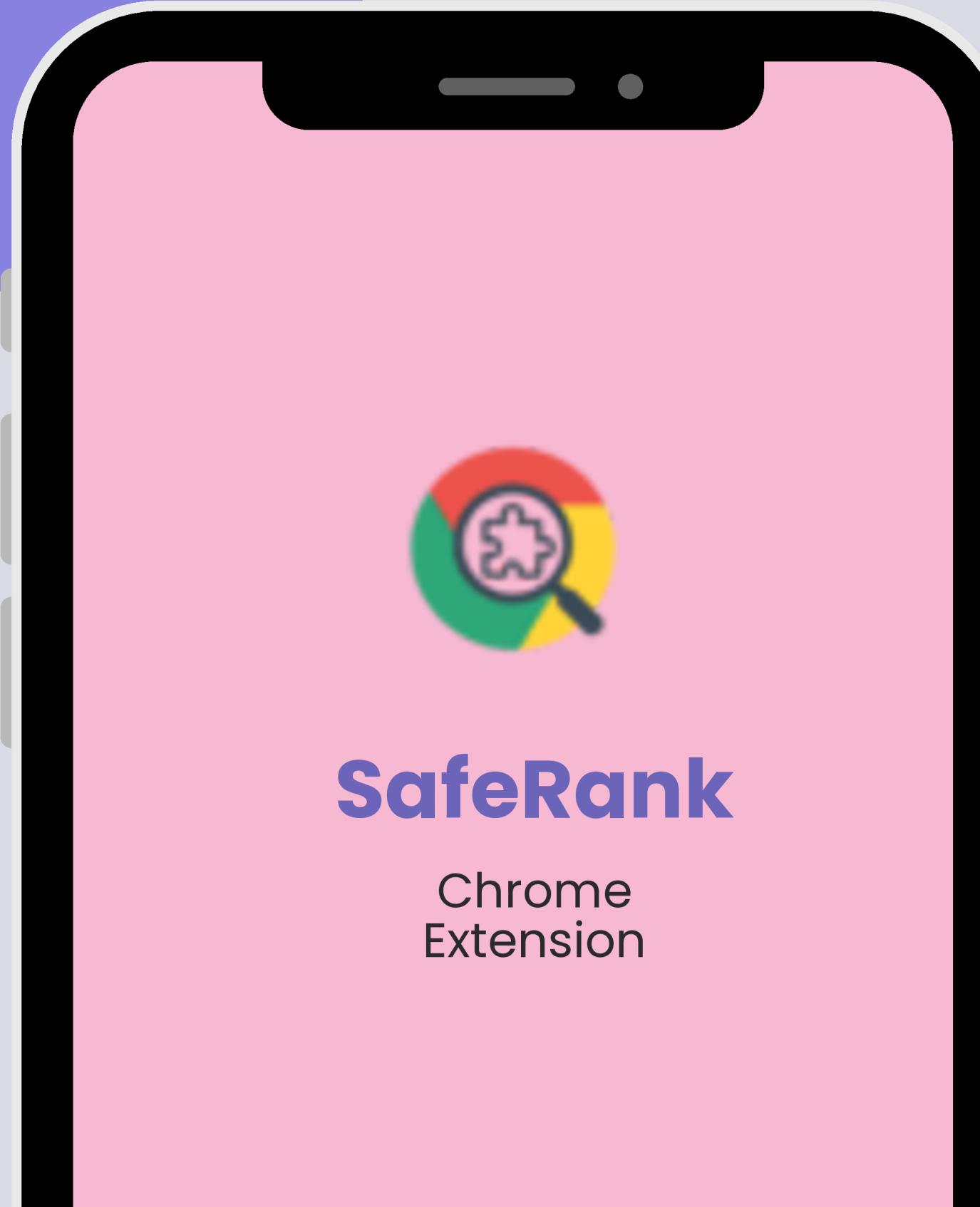


Technical Architecture



- APIs Used:
- `webRequest` → Monitor site requests.
- `scripting` → Inject scanner scripts.
- `storage` → Save scores/history.
- `activeTab` → Analyze current tab.

- Manifest V3 Chrome Extension.
- Content Script: Scans web pages.
- Background Service Worker: Manages data, scoring, history.
- Popup UI: Displays score + tracker breakdown.



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WOMEN SAFETY