TruthGuard

Fake News Detector
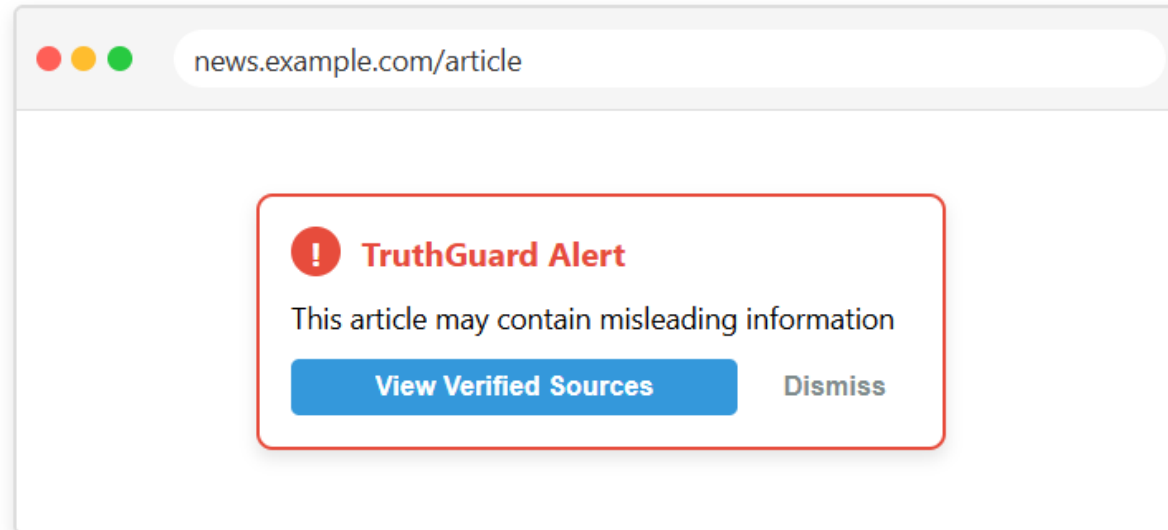
A Chrome Extension for Verifying News Content

The Problem

- Misinformation spreads **6x faster** than factual content online

- **59%** of people have shared news without verifying its accuracy

- Traditional fact-checking can't keep pace with the volume of content

- Users lack tools to quickly verify information while browsing

Our Solution: TruthGuard

A Chrome extension that:

- Automatically scans news articles in real-time

- Detects potentially misleading content using NLP techniques

- Alerts users about suspicious information

- Provides links to verified alternative sources

news.example.com/article

! TruthGuard Alert

This article may contain misleading information

View Verified Sources   Dismiss

How It Works

Detection Process

1. **Analyze** page content for misinformation patterns

2. **Identify** suspicious articles based on:
   - Known unreliable domains

   - Conspiracy theory indicators

   - Vague attributions and sources

   - Sensationalist language

3. **Direct** users to trustworthy alternatives

⚠️ **TruthGuard Alert**

This article may contain misleading information

- Contains conspiracy theory indicators

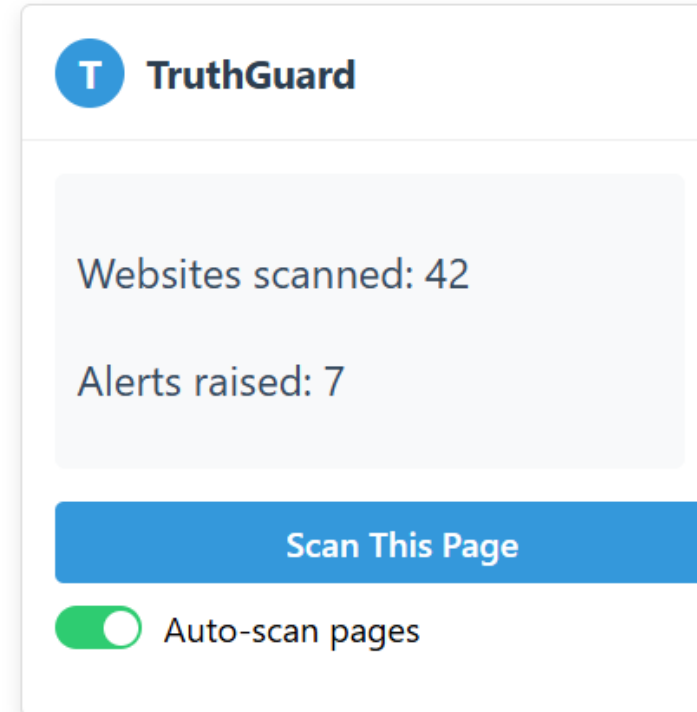- Uses vague attribution without specific sources

View Verified Sources   Dismiss

Technical Implementation

- **Manifest V3 Chrome Extension:** Modern, secure architecture

- **Content Scripts:** Run on news sites to analyze content

- **Pattern Database:** Keywords and thresholds for detection:
    - Conspiracy theories (5G, microchips)
    - Sensationalist claims ("miracle cure")
    - Vague sourcing ("people are saying")

- **Verified Sources Database:** Organized by topic categories:
    - Health, Vaccines, Climate, Politics, General

- **Unobtrusive UI:** Clean notifications with actionable options

Key Features

- **Automatic Scanning:** Works in the background while browsing

- **Manual Scan Option:** On-demand verification

- **Topic Classification:** Matches misleading content to verified alternatives

- **Usage Statistics:** Tracks scans and alerts for user awareness

- **Customizable Settings:** Toggle auto-scan functionality

T TruthGuard

Websites scanned: 42

Alerts raised: 7

Scan This Page

Auto-scan pages

User Experience

When suspicious content is detected:

1. Unobtrusive alert appears with explanation

2. User can view verified alternative sources:

   - WHO: Vaccines and Immunization

   - CDC: Vaccines and Preventable Diseases

   - FactCheck.org

   - Reuters: World News

3. One-click access to reputable information

4. Option to dismiss or save for later

❗ Verified Sources

Here are some verified sources on this topic:

WHO: Vaccines and Immunization

CDC: Vaccines and Preventable Diseases

NIH: Health Information

Back

TruthGuard - Fake News Detector

Developed for Hackathon 2025

Helping users navigate the sea of information with confidence

Future Development

| Machine learning integration | Community reporting system | Enhanced analytics | Expanded language support |