Indian Institute of Information Technology Kottayam

Hackoona Matata

VerifiAI – The AI-Powered Guardian of Truth

Aim for a futuristic, authoritative name that conveys trust and accuracy.

TEAM NAME: **JNR**

Jayashre K (Team Leader)
Nidhi Gummaraju (Team Member)
Roahith R (Team Member)

PROBLEM - ISSUE AND RELEVANCE

The Rise of AI Generated Misinformation

AI-generated misinformation erodes trust in media, while traditional fact-checking struggles to keep up. False information spreads six times faster than the truth, influencing elections, public opinion, and global stability. A scalable, real-time solution is urgently needed.

Why Now?

With the rise of LLMs like ChatGPT, Sora, and Gemini, misinformation is becoming hyper-realistic.

Elections, conflicts, pandemics—misinformation is influencing global events.

Traditional fact-checking struggles due to scale, complexity, and AI-generated deception.

Market Gap

No real-time, multi-modal (text + image + video) automated fact-checking system exists.

Fact-checking tools today rely on manual processes or outdated databases.

SOLUTION – APPROACH AND BENEFITS

VerifiAI is an AI-powered fact-checking system that detects and explains misinformation in real time across text, images, and videos. It goes beyond simple true/false classifications by providing context-aware verification.

KEY FEATURES

Deepfake & AI Content Detection – Uses adversarial AI to identify manipulated visuals.

Context-Based Fact Verification – Analyzes claims against verified sources and historical data.

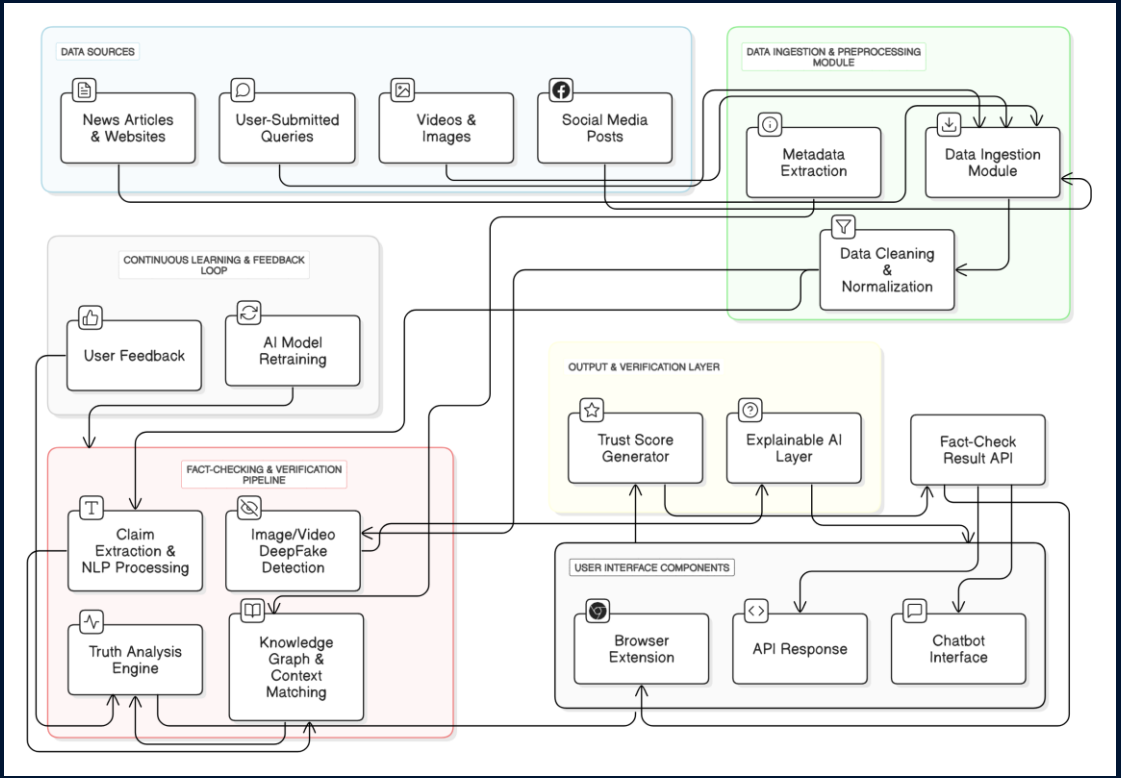
Seamless Integration – Available as a browser extension, API, and social media chatbot.

Trust Score & Transparency – Assigns credibility scores to sources for bias-aware fact-checking.

BENEFITS

- **Real-time fact-checking** to prevent misinformation spread.
- **User-friendly tools** for journalists, researchers, and the public.
- **User-friendly tools** for journalists, researchers, and the public.
- **Scalable and adaptable** across different platforms and media formats.
- **Multi-modal AI** for text, image, and video verification.

TECH APPROACH – STACK AND ARCHITECTURE



- **LLM + Vision Models** (Llama-3, Groq, CLIP) for text & image verification
- **Adversarial AI** – AI vs AI for deepfake detection **Graph-based Knowledge Retrieval** (Neo4j + RAG) to trace sources
- **Blockchain-powered Trust Ledger** (Ethereum, Hyperledger) for transparent fact storage
- **Federated Learning** – Privacy-focused, user-data-driven model refinement

FESABILITY – CHALLENGES AND SCALABILITY

Challenges:

- **Evolving Deepfakes** – Need for continuously adapting AI.
- **Scalability** – Handling **millions of fact-checks per minute**.
- **Bias in AI** – Ensuring fairness and non-partisanship.

Scalability:

- **Decentralized Verification Nodes** – Blockchain-based distributed fact-checking
- **Federated Learning** – Models improve without compromising privacy
- **Real-Time API** – Can be integrated into **news portals, social media, and browser extensions**

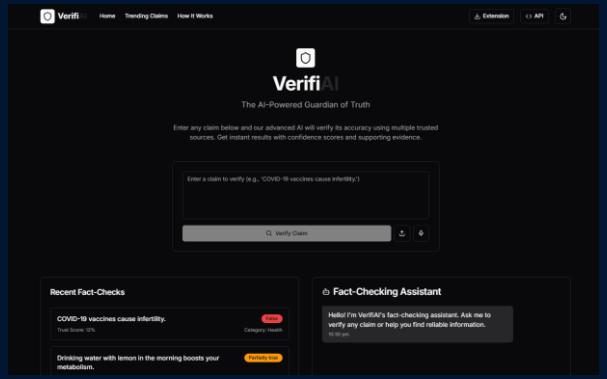
IMPACT – BENEFITS AND FUTURESCOPE

- **Empowering Media & Citizens** – Journalists, researchers, and individuals can **verify any claim instantly.**
- **Election & Crisis Protection** – Verifies political claims, health misinformation, and crisis updates.
- **Integration with Social Media & Search Engines** – Chrome plugin, WhatsApp bot, and API for platforms.
- **AI-Powered Defense Against AI-Generated Misinformation**

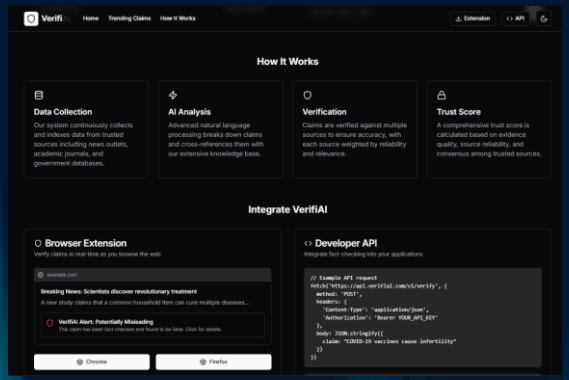
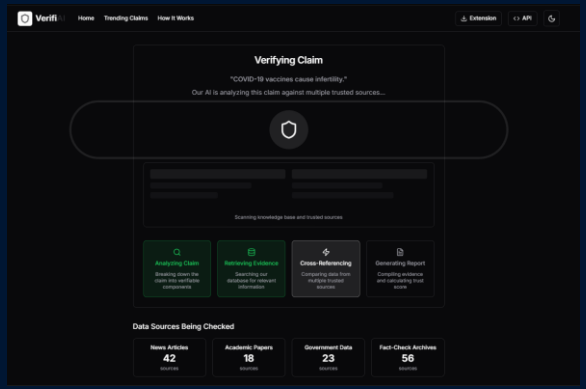
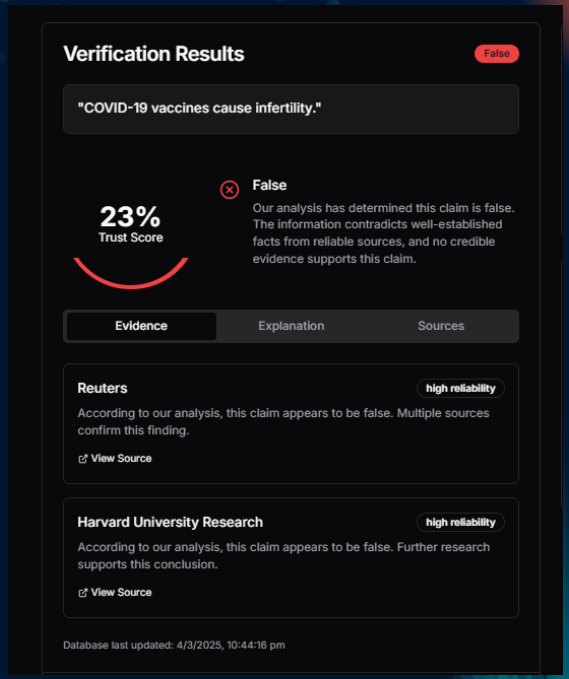
Future Vision:

✓ **AI-Powered News Assistant** – Summarizes verified news in real-time.
✓ **Government & Fact-Check Partnerships** – Work with **election commissions & watchdogs.**
✓ **Community-Driven Verification** – Allows experts to **train AI with real-world inputs.**

PROTOTYPE – WIREFRAME AND MOCKUPS



Home Page



Analysis page