

INFO Challenge 2025

Category: Design

Challenge Name: AI Recognition Tool Design

Team Number: IC25078

AI Verify

Verify government related news with trusted sources and AI-powered detection.

Meet the team



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I Introduction

We aim to address the rise of fake news by Gen AI, driven by technological advancements, legal constraints, and market gaps.

Rapid Development of Generative AI Tools

- AI-generated content was rare until early 2023 but surged as AI-generation tools became widespread.¹⁾

Lack of Liability on Social Media Platforms

- Social media are not liable for fake content (*Communications Decency Act*).²⁾
- For U.S. adults under 30, social media were the primary election news source.³⁾

Absence of AI-Powered Solutions in the Industry

- Current AI detection focuses on fraud detection, assessing authenticity to identify AI-generated content, and generating metadata analysis.⁴⁾

**The general public, regardless of AI expertise,
needs a reliable detection/checker tool
to verify AI-generated misinformation,
because access to credible information
strengthens digital media literacy.**



MindPetal supports diverse solutions to advance government initiatives. Our AI detection tool strengthens fact-based communication between the government and the public, expanding MindPetal's role in AI-driven governance.

II User Research

Before designing the service, we conducted user research on interactions, needs, and challenges with AI detection and fact-checking.

Research Questions

What features and functionalities do users expect from AI-detection & fact-checking tools?

What challenges do users face when verifying misinformation with AI-detection & fact-checking tools?

Methodology

Observation &
Contextual Inquiry
with Think-Aloud

Procedure

- Three fact-checking tasks using AI detection tools (Text & Image)
- Post-interview on their task experience and prior exposure to fake news or AI detection

Participants

Five UMD graduate students recruited

Insight Extraction

To derive actionable solutions, we analyzed qualitative data, identified pain points, and grouped behaviors by the stages of AI detection tool use.

AI-Assisted Data Synthesis

Then, we used ChatGPT and Claude.ai to synthesize primary insights through thematic analysis and journey map.

Based on the **thematic analysis**, four themes were identified:

Expectations for Feature Improvements

- Need for **explanations**
- **Cross-check** references
- **Personal mental models** to interpret the results

Usability & Interaction Barriers

- Expects **Drag & Drop**
- **Input method** → Ease of use

Trust & Transparency in AI Detection

- **Concrete** AI-generated patterns
- **Structured Result screen** interface reinforce trust

Fact-Checking & Verification Behavior

- **Source** validation
- Specific, over vague Statements
- Integrated fact-checking flow

Based on the **journey mapping**, we found that:

Discovery & Access

Users need **intuitive navigation** and **onboarding** to effectively engage.

Input

Users expect **diverse input options** and **clear feedback** to improve usability.

Review Results

Providing **contextual explanations** and **visual clarity** helps interpretation.

Evaluate & Decide

Transparent reasoning and **source verification** strengthen trust.

III Product Design

Product Concept

AI Verify

AI-Detected, Truth-Protected.

Value Proposition

Detect AI-driven fake news
and enhance public media literacy

Target Audience

General public with minimal technical expertise, seeking to fact-check news

Main Functionalities

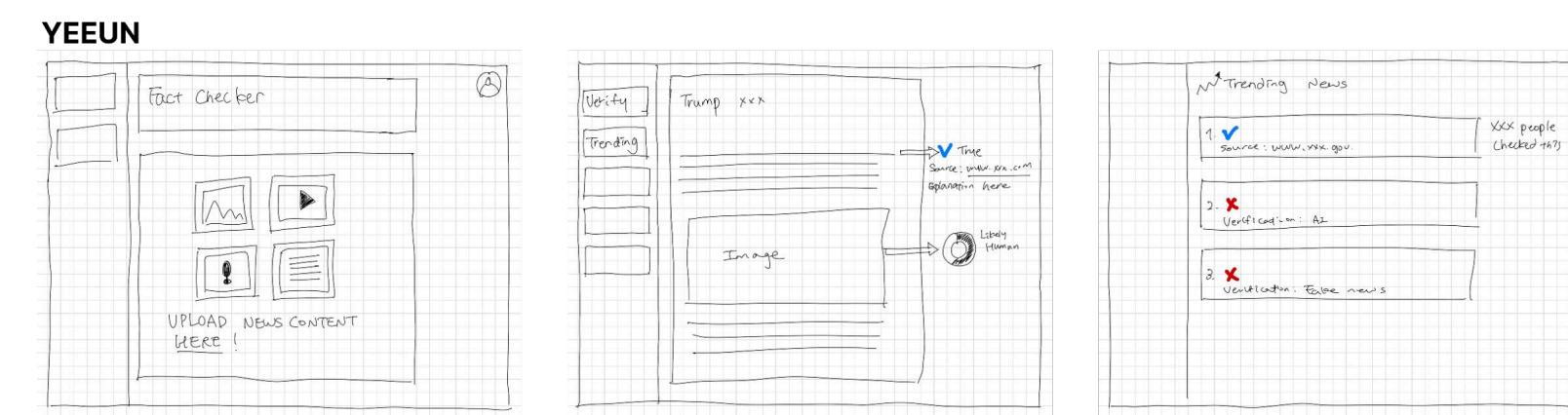
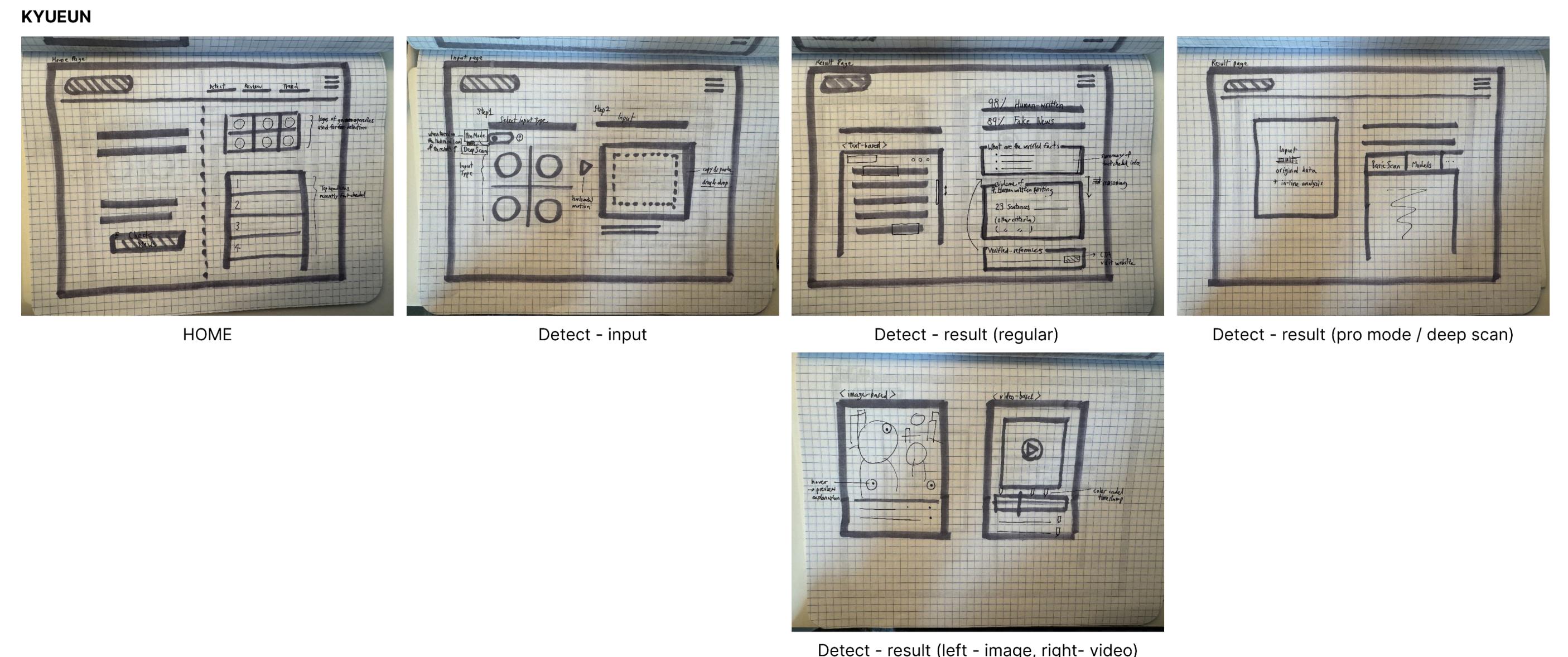
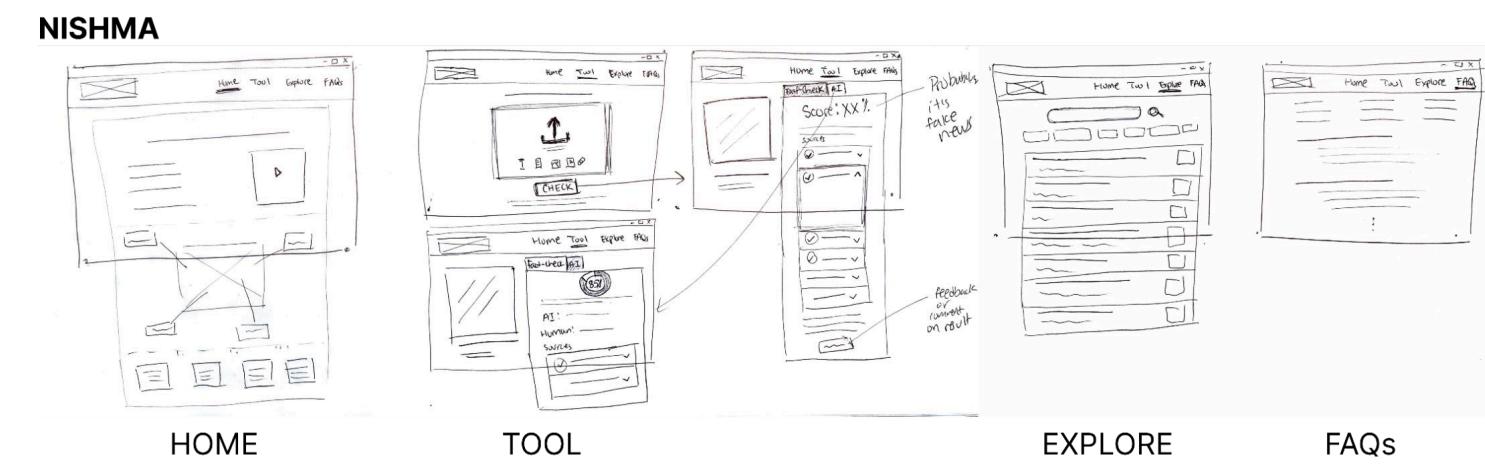
Identify AI-generated content
and verify government-related fake news

Key Features

- Support multimedia input
- Connect to primary sources
- Verify information based on government statements and trusted news agencies

Brainstorming

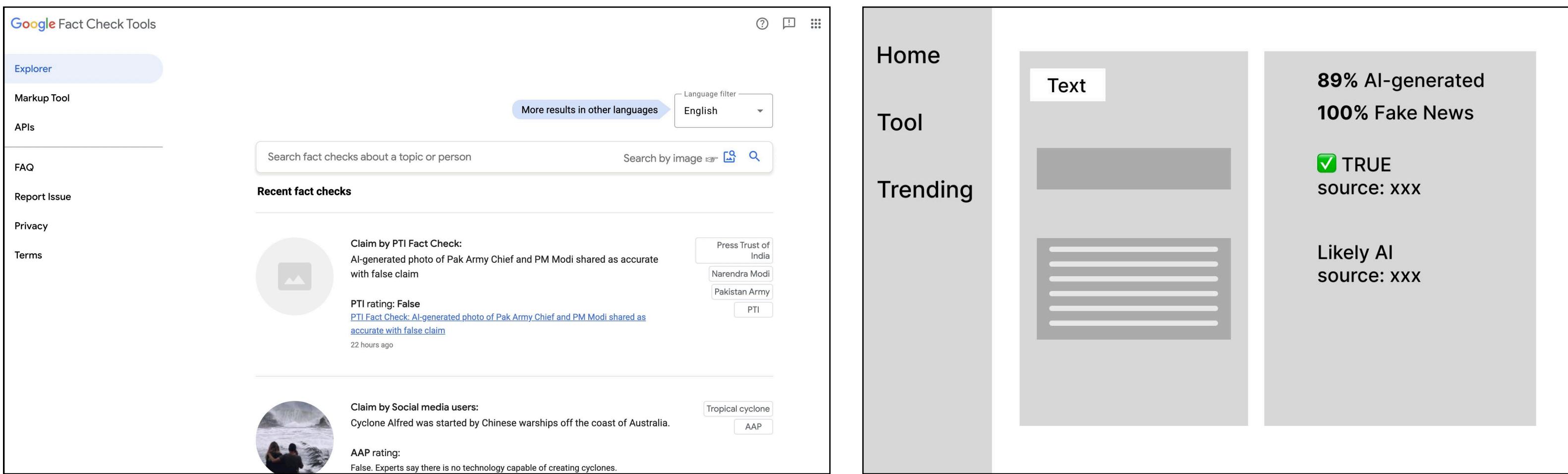
We came up with 4 sections of websites, which are Home, Tool, Result, and Trending News.



Wireframes V1

First, we came up with a vertical navigation bar, referencing Google Fact Check Tools.

However, we realized we need more space for the verification section.



This wireframe shows a vertical navigation bar on the left with links like 'Explorer', 'Markup Tool', 'APIs', 'FAQ', 'Report Issue', 'Privacy', and 'Terms'. The main area has a search bar, a 'Recent fact checks' section with two items, and a sidebar with sections for 'Home', 'Tool', and 'Trending'.

Recent fact checks

- Claim by PTI Fact Check:**
AI-generated photo of Pak Army Chief and PM Modi shared as accurate with false claim
PTI rating: False
[PTI Fact Check: AI-generated photo of Pak Army Chief and PM Modi shared as accurate with false claim](#)
22 hours ago
- Claim by Social media users:**
Cyclone Alfred was started by Chinese warships off the coast of Australia.
AAP rating: False. Experts say there is no technology capable of creating cyclones.

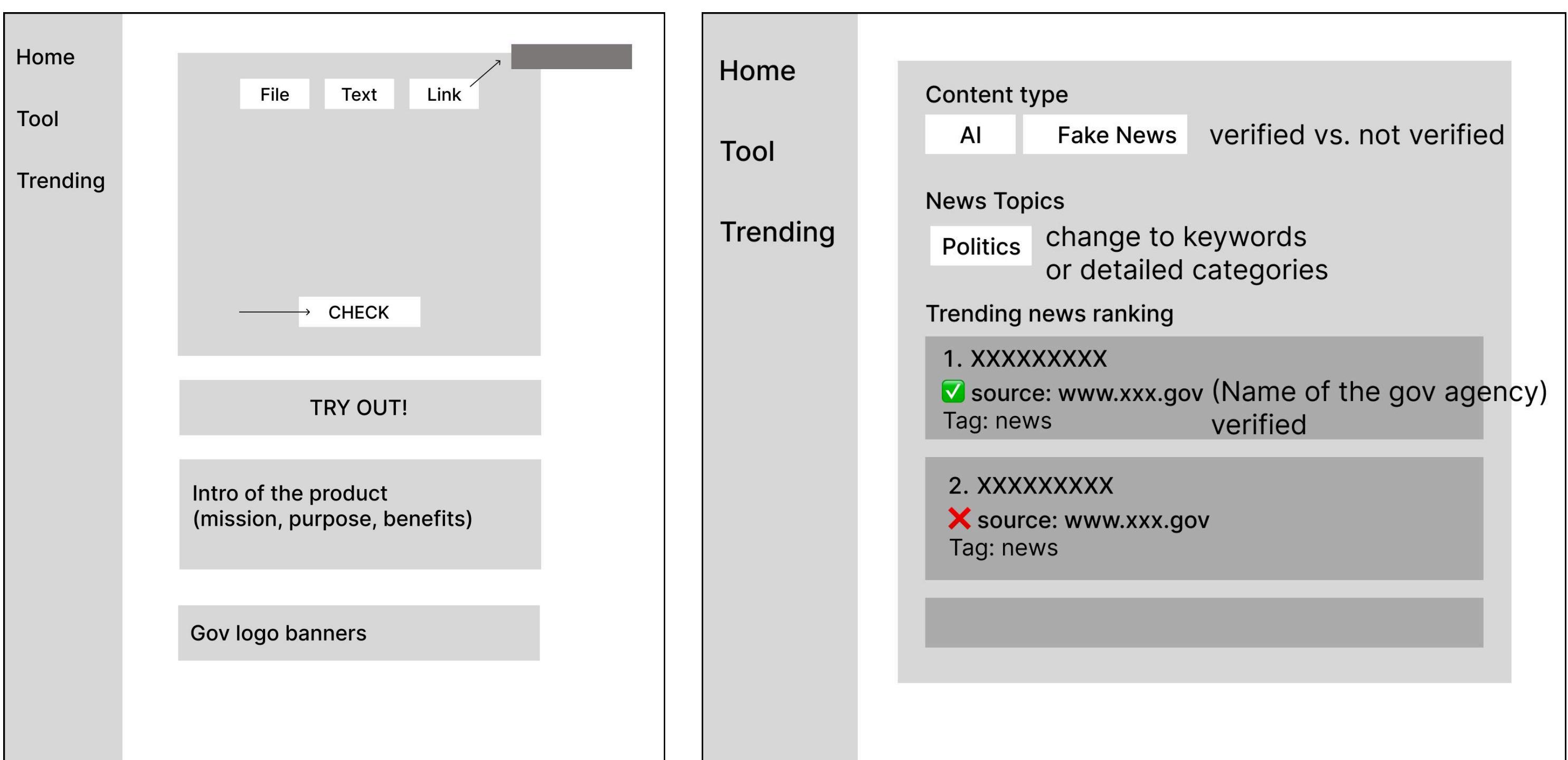
Home
Tool
Trending

Text

**89% AI-generated
100% Fake News**

TRUE
source: xxx

Likely AI
source: xxx



This wireframe shows a vertical navigation bar on the left with 'Home', 'Tool', and 'Trending' sections. The main area contains a 'CHECK' button, a 'TRY OUT!' button, an 'Intro of the product (mission, purpose, benefits)' section, and 'Gov logo banners'.

Content type
AI Fake News verified vs. not verified

News Topics
Politics change to keywords or detailed categories

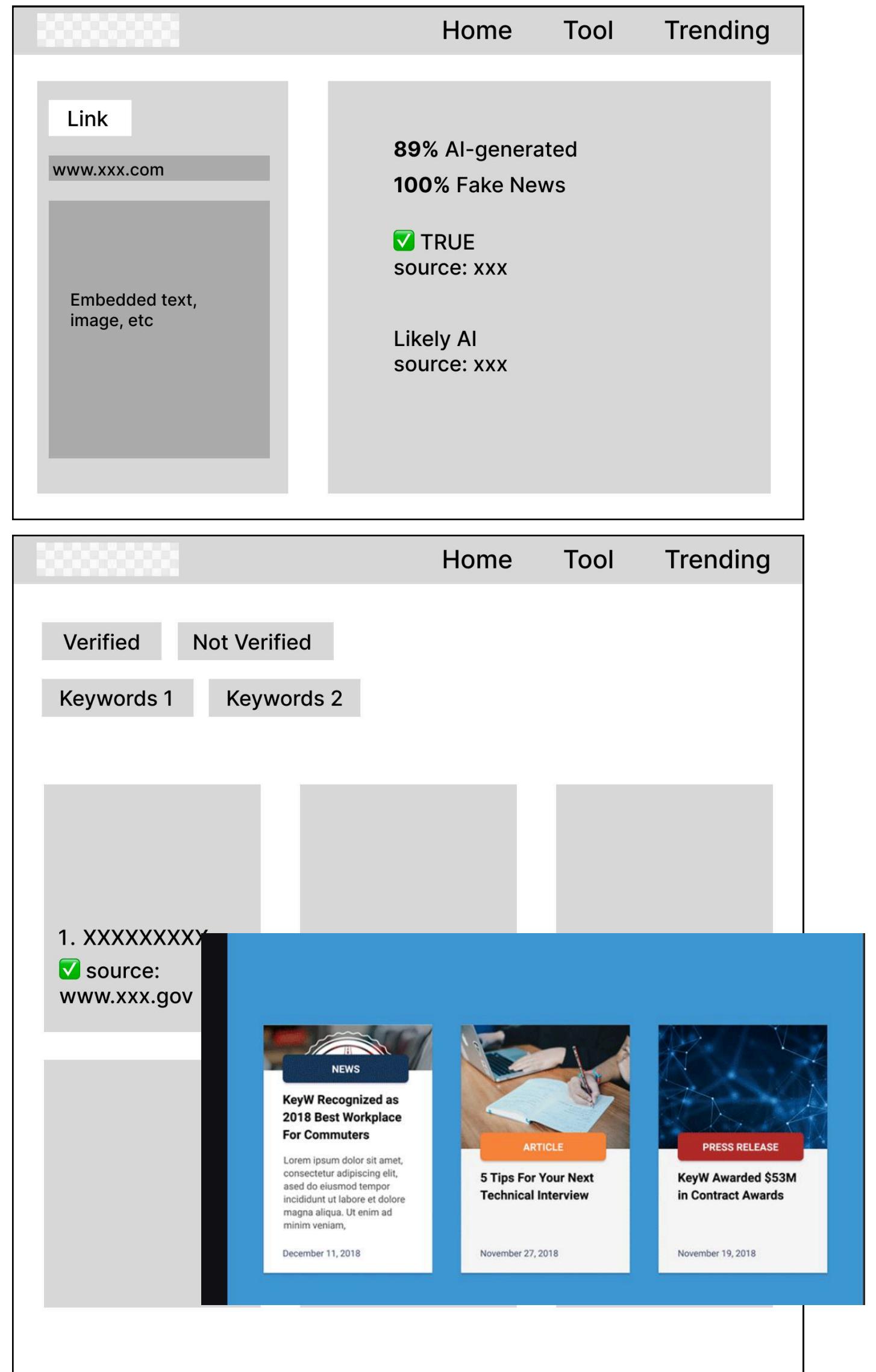
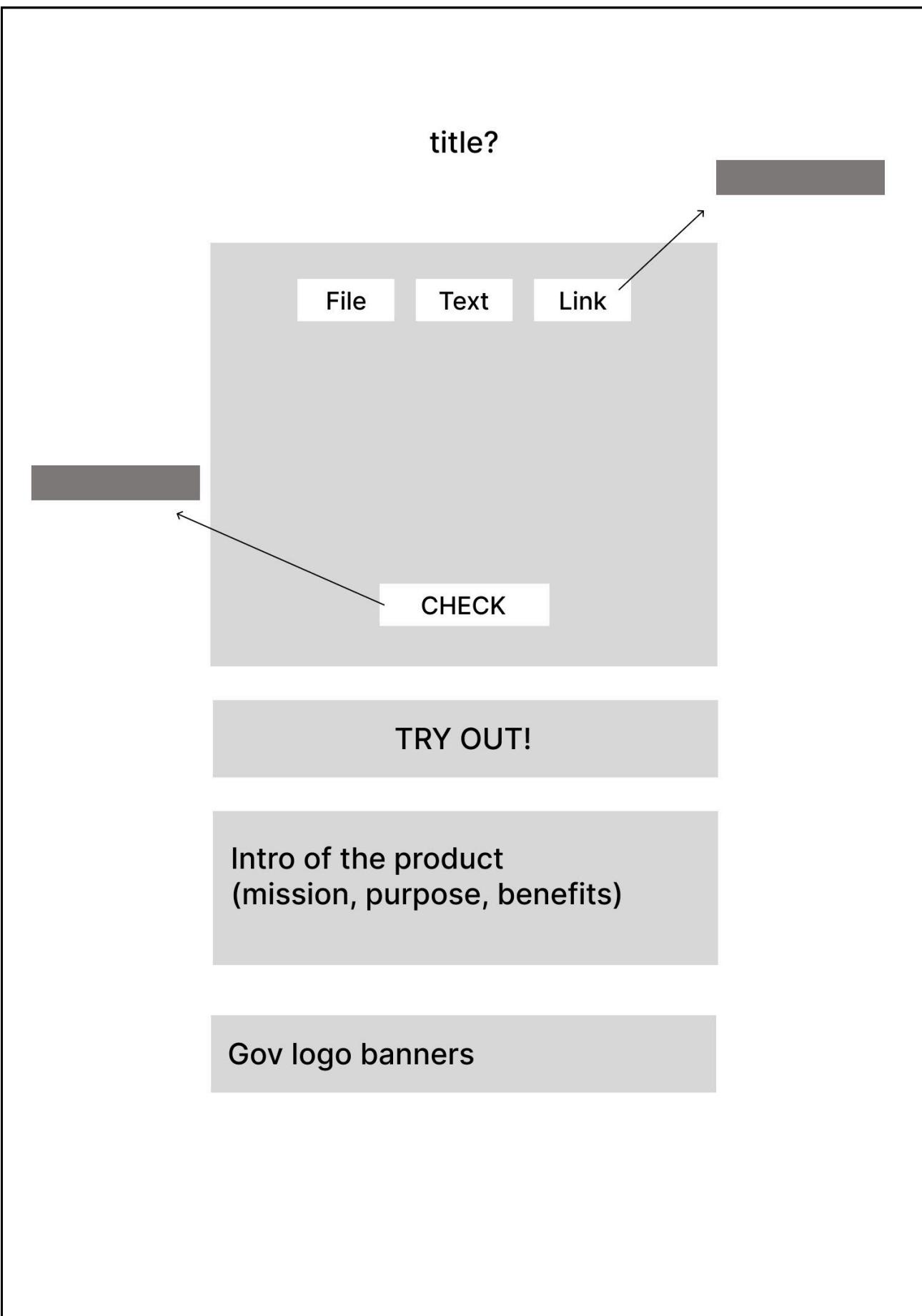
Trending news ranking

1. XXXXXXXXX
✓ source: www.xxx.gov (Name of the gov agency)
Tag: news verified
2. XXXXXXXXX
✗ source: www.xxx.gov
Tag: news

Wireframes V2

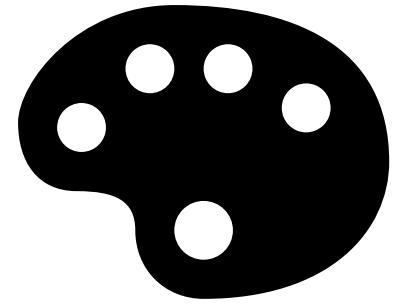
We moved the navigation bar to the top.

For the better visibility, increased the space of the “results” section; replaced news thumbnails with card format.

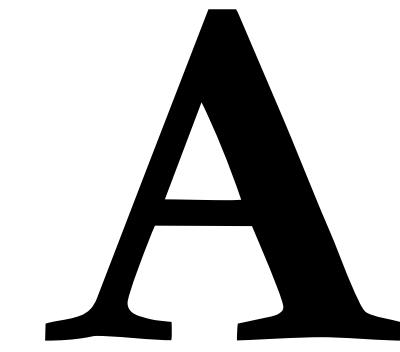


Before creating our prototype, we established a design system to organize and standardize elements such as colors, typography, layout, and components to provide a cohesive user experience.

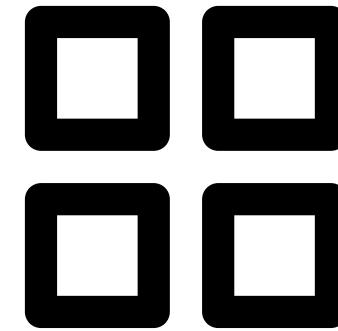
Color Palette



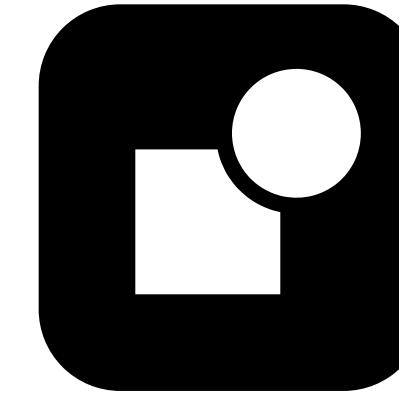
Typography



Grid Layout



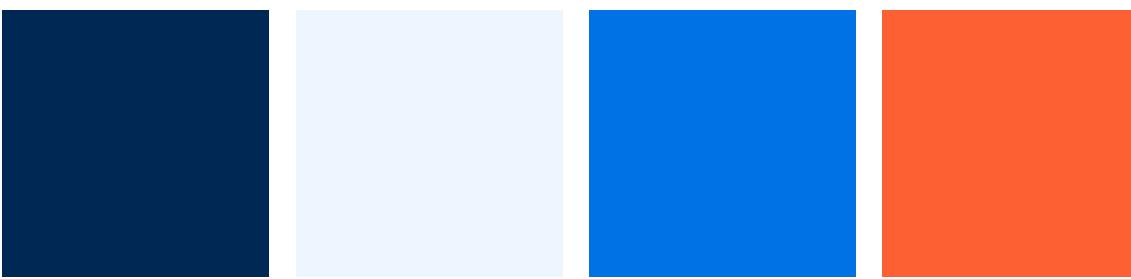
Components



Color Palette

Design Principle:
Trust,
Authority, and
Accessibility

Main Colors



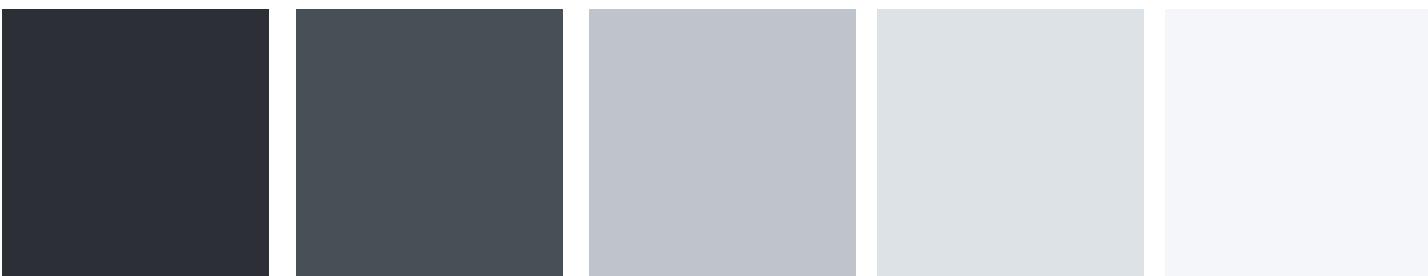
Signal Colors



Black and White



Greys



Typography

Main goals:
Readability,
Clarity, and
Professionalism

Brand Name Poppins Bold – AI Verify

Heading 1 Open Sans Bold (32)

Heading 1 Open Sans Regular (32)

Heading 2 Open Sans SemiBold (24)

Heading 2 Open Sans Regular (24)

Normal Body Text Open Sans SemiBold (20)

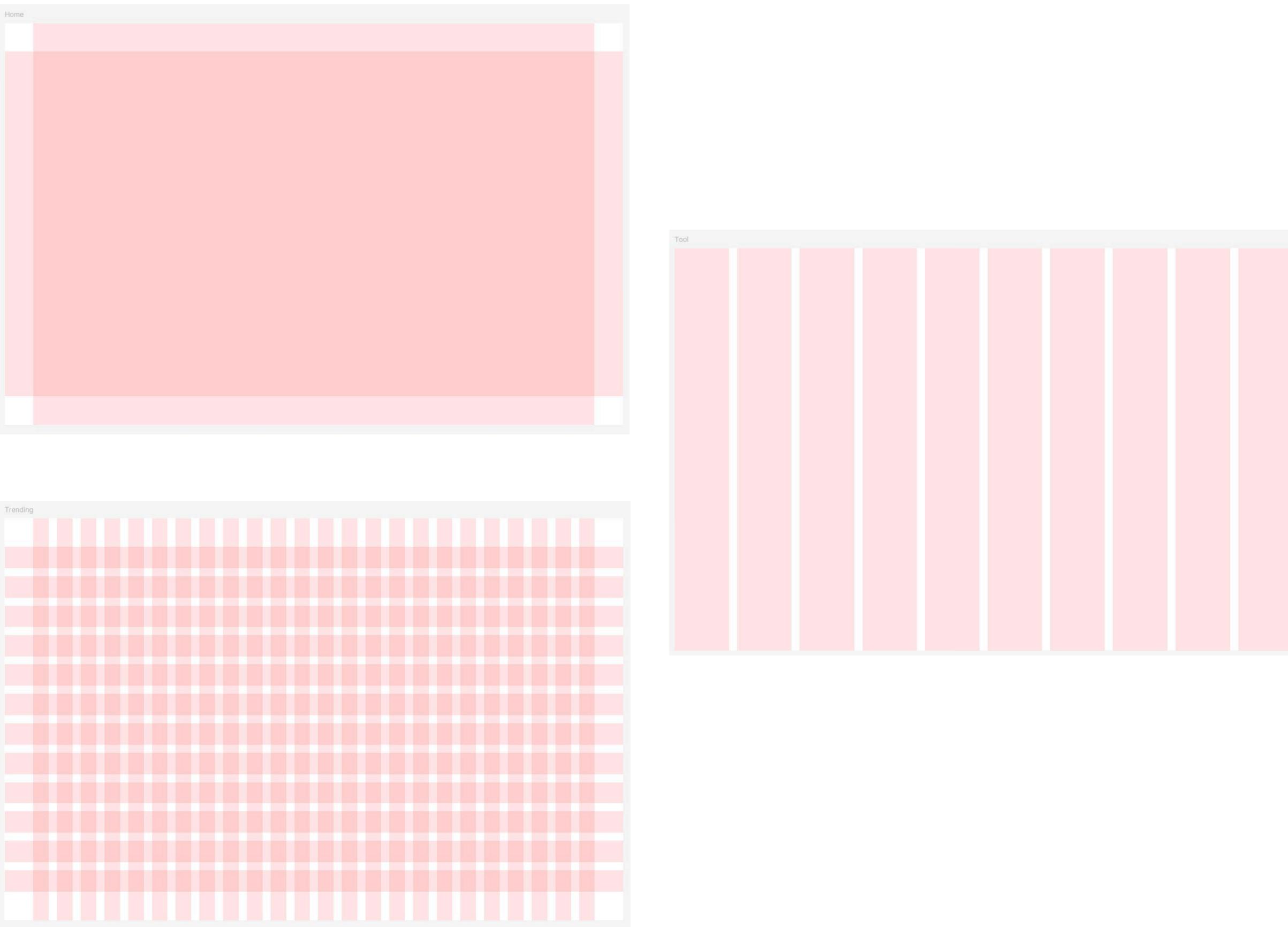
Normal Body Text Open Sans Regular (20)

Small Body Text Open Sans Light (18)

Grid Layout

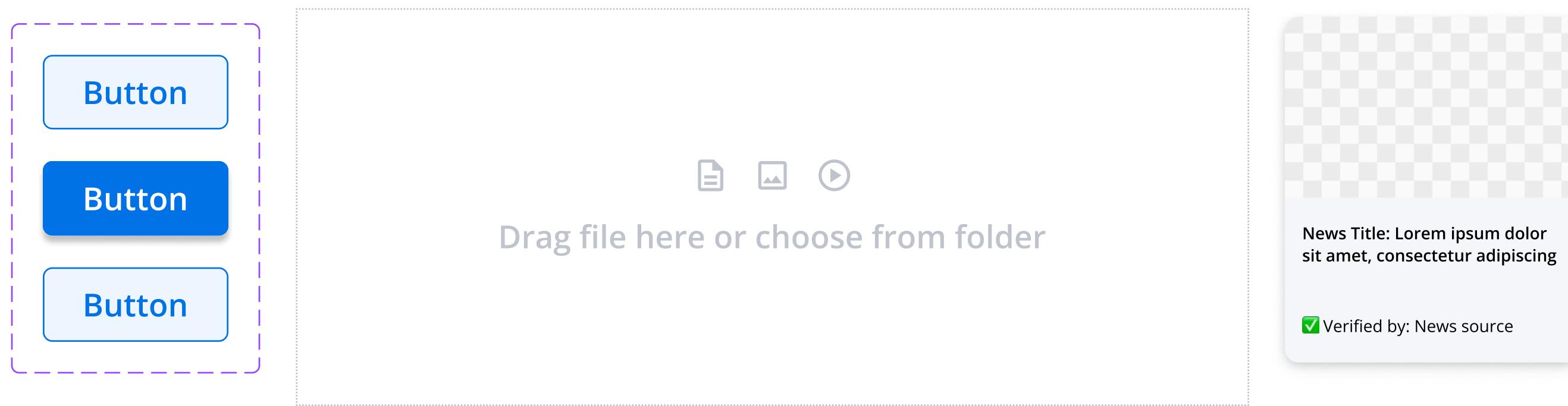
We identified 3 types of grid layouts for our screens:

Manuscript for the Home Page, Columnar for the Verification Page, and Hierarchical for the Trending Page



Components

**When creating components,
we focused on: scalability,
accessibility,
responsiveness, and
consistency.**



AI Verify

Home

AI Verification

News Feed

IV Prototypes

Interactive Prototype

AI Verify

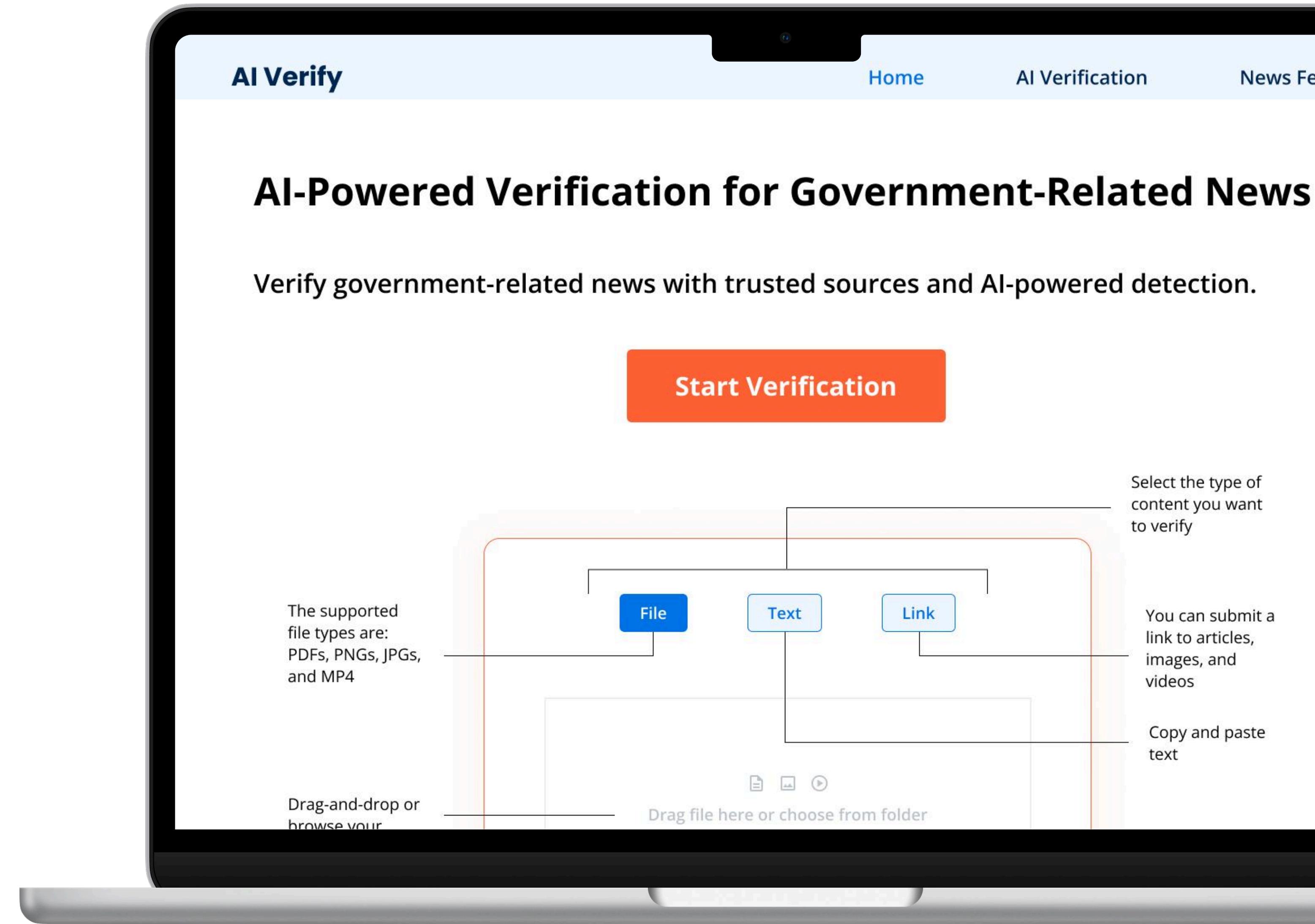
Verify government related news with trusted sources and AI-powered detection.

Check the interaction mode [HERE](#).

The screenshot shows a web application titled "AI Verify". The top navigation bar includes links for "Home", "AI Verification", and "News Feed". The main title "AI-Powered Verification for Government-Related News" is displayed prominently. Below it, a sub-instruction reads "Verify government-related news with trusted sources and AI-powered detection." A large orange button labeled "Start Verification" is centered. To the right, there is a section for selecting content type, with options "File", "Text", and "Link". A note specifies supported file types: PDFs, PNGs, JPGs, and MP4. Below this, there are two input fields: one for dragging files and another for pasting text. A legend on the right side provides instructions: "Select the type of content you want to verify" (with icons for File, Text, and Link), "You can submit a link to articles, images, and videos", and "Copy and paste text". A note at the bottom indicates supported file types: PDFs, PNGs, JPGs, and MP4. A "Drag-and-drop or browse your" file field is shown, along with a "Drag file here or choose from folder" instruction. The bottom of the interface features a dark footer bar.

Home

Introduces the concept of the product to the users with a demo.



AI Verification

Upload multimedia content
to verify and fact-check.

The image shows a laptop screen with a white background. At the top, there is a dark blue header bar with the text "AI Verify" in white. To the right of the header are three links: "Home", "AI Verification", and "News Feed". Below the header, the main content area has a light gray background. In the center, the text "Submit Content for Verification" is displayed in bold black font. Below this, a sub-instruction reads: "Upload a file, enter text, or provide a link to assess its authenticity and source credibility." There are three buttons below the instruction: "File" (blue), "Text" (light blue), and "Link" (light blue). To the right of these buttons is a large, empty rectangular input field with a thin gray border. Inside the field, there are three small icons: a document, a camera, and a link. Below the icons, the text "Drag file here or choose from folder" is written in a smaller, gray font. At the bottom right of the input field is a blue button with the white text "Verify Now".

Results - Image

Detect authenticity
and the source of the image.

AI Verify

Home AI Verification News Fe

Input Type: Image

This content is 89% likely AI Generated

Likely generated from ChatGPT

AI generated

1. The fingers on the hand are distorted and un-humanlike.
2. The flag is warped.
3. The face of the person has an airbrushed texture.
4. The text on the sign is not a real language and illegible.

Verification sources

US government

According to US government congress, there is no evidence that this photo was ever taken in public speech.

Results - Text

Verify the source of text
and detect if it's AI generated.

The image shows a mobile application interface for "AI Verify". The top navigation bar includes "AI Verify" (in bold), "Home", "AI Verification", and "News Feed". The main content area has two sections: "Input Type: Text" and "Here's What We Found".

Input Type: Text

Text input: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc vulputate libero et velit interdum, ac aliquet odio mattis. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Curabitur tempus urna at turpis condimentum lobortis. **AI Generated Sentence** (highlighted in red)

Here's What We Found

- This content is 89% likely AI Generated**
- This content has a 100% chance of being fake news**
- Likely generated from ChatGPT**

Deep scan

AI Generated Sentence
Use of common AI phrasing detected:
cast doubt

Result - Link

Verify the authenticity of the information in a link
(news, etc.)

AI Verify

Home AI Verification News Feed

Input Type: Link ↗

<https://www.cbsnews2.com/>

Europe scrambles to rearm as Trump threatens security guarantees and Russian threat looms. Here's what to know

By Helen Hagen, CNN
5 minute read · Published 12:55 AM EST Fri March 7, 2014

CNN — European leaders have vowed to ratchet up security guarantees over the transatlantic relations, suspended all military aid and intelligence sharing to Kyiv and again cast doubt that the US would defend its NATO allies if attacked.

Since taking office in January, US President Donald Trump has fundamentally changed transatlantic relations, suspended all military aid and intelligence sharing to Kyiv and again cast doubt that the US would defend its NATO allies if attacked.

With Russia posing what French President Emmanuel Macron called an "existential threat" to Europe, the continent is now scrambling to prepare for the once-unthinkable prospect of defending itself in a potential future conflict without the help of America.

And as the European Union leaders push for Ukraine and Europe to head in peace talks, they were joined by Ukrainian President Volodymyr Zelensky in Brussels on Thursday.

Zelensky announced he will visit Saudi Arabia next week to present an initial ceasefire plan.

LET'S GET YOU TAKEN CARE OF[®]

MORE FROM CNN

European leaders agree on defense spending surge at summit

A松子在恢复欧洲领导地位时...
乌克兰希望美国继续支持欧洲，但美国...

Deep scan

This content is 89% likely AI Generated

⚠ This content has a 100% chance of being fake news

Likely generated from ChatGPT

✖ AI generated sentence

Use of common AI phrasing detected:

cast doubt

News Feed

Check and verify the trending news.

AI Verify

Home AI Verification News Feed

Fact-Checked News & Reports

Explore the latest verified government news and AI-analyzed reports.

Verified AI Generated Fake News

Economy Health Politics Society World

Filter

 Trump signs executive order creating task force to oversee prep for 2026 World Cup
✓ Verified by: CNN Politics

 Starmer welcomes EU moves to boost defence spending
✓ Verified by: CNN Politics

 China's foreign minister criticizes US tariffs and accuses the country of...
✓ Verified by: AP News

References

Dufour, N., Pathak, A., Samangouei, P., Hariri, N., Deshetti, S., Dudfield, A., Guess, C., Hernández Escayola, P., Tran, B., Babakar, M., & Bregler, C. (2024, May 19). *AMMeBa: A large-scale survey and dataset of media-based misinformation in-the-wild*. arXiv. <https://doi.org/10.48550/arXiv.2405.11697>

Global AI in Fraud Detection Market Report – Industry Segment Outlook, Market Assessment, Competition Scenario, Trends and Forecast 2024-2033. (2024, August). Market.us. <https://market.us/report/ai-in-fraud-detection-market/>

Shearer, E., Lipka, M., Naseer, S., Tomasik, E., & Jurkowitz, M. (2024, October 10). *Americans' views of 2024 election news*. Pew Research Center. <https://www.pewresearch.org/journalism/2024/10/10/americans-views-of-2024-election-news/>

Virginia Tech. (2024, February 22). *AI and the spread of fake news sites: Experts explain how to counteract them*. Virginia Tech News. <https://news.vt.edu/articles/2024/02/AI-generated-fake-news-experts.html>

Appendix

Abstract

With the growing rate of AI-generated content and the rapid spread of deepfakes and fabricated news, it is becoming increasingly challenging for users to differentiate between credible information and misinformation/disinformation. As stated under Section 230 of the Communications Decency Act, social media platforms are not held accountable for hosting political disinformation, creating an urgent need for reliable AI-generated content detection tools. Fake news—often created and distributed in various multimedia formats like videos and articles—is continuing to spread, so the general public must have access to effective fact-checking mechanisms to verify content and enhance digital media literacy.

Our project aims to address this challenge by designing a comprehensive AI detection and fact-checking tool that prioritizes trust, transparency, and usability. We conducted user research testing of existing AI detection tools which revealed critical barriers, including lack of confidence in AI-generated assessments, usability challenges, and verification behavior gaps. Our solution is targeted towards general users regardless of technical expertise, offering AI-generated content detection alongside government-related news fact-checking. The system's core functionalities are designed to support the entire user journey. Users can input multimedia content, and the detection process delivers probability-based results by integrating AI and human verification, referencing primary government sources and trusted news agencies. To enhance credibility, the tool includes verified markers and redirection to authoritative sources for further validation. By empowering users to navigate misinformation, our project promotes credibility and transparency in digital media to bridge the gap between technology and informed decision-making.

Background

Rapid Development of Generative AI Tools

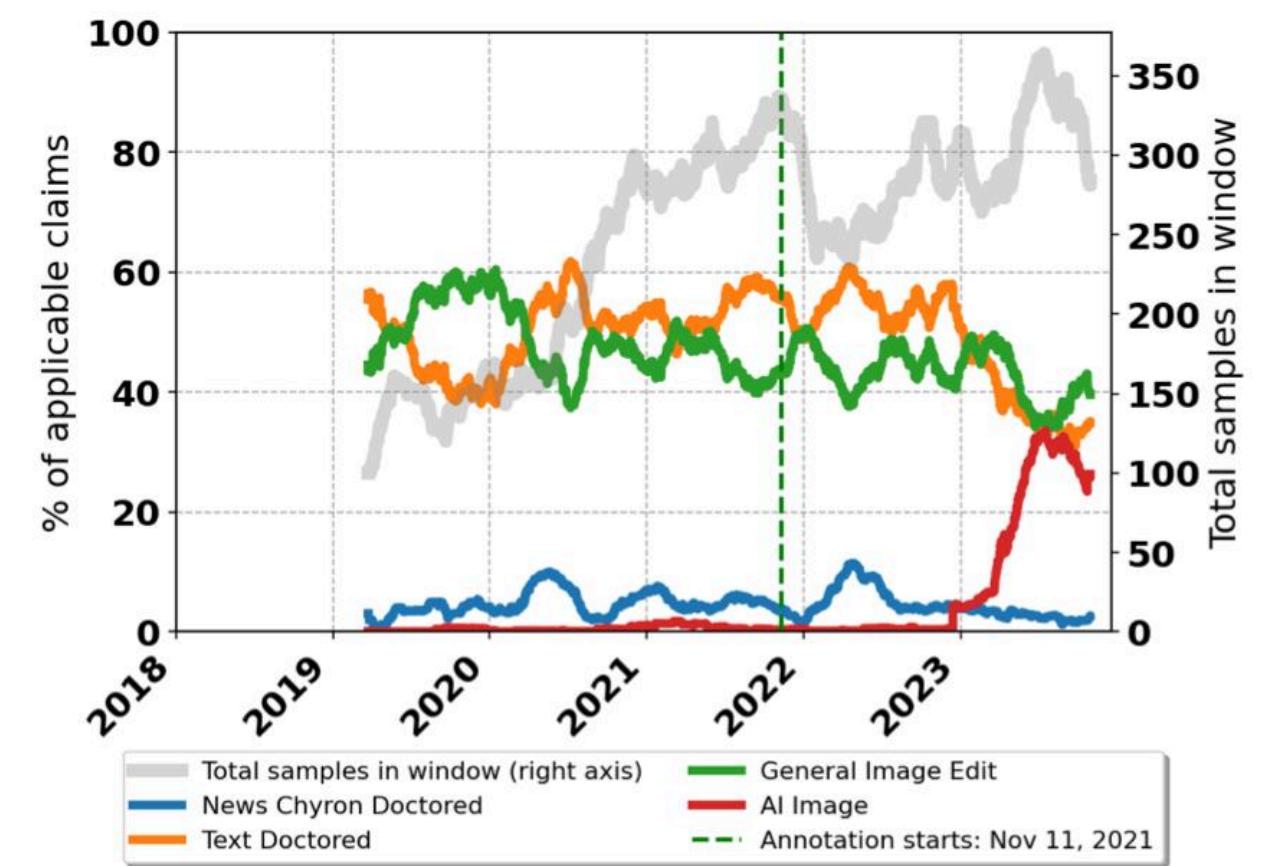
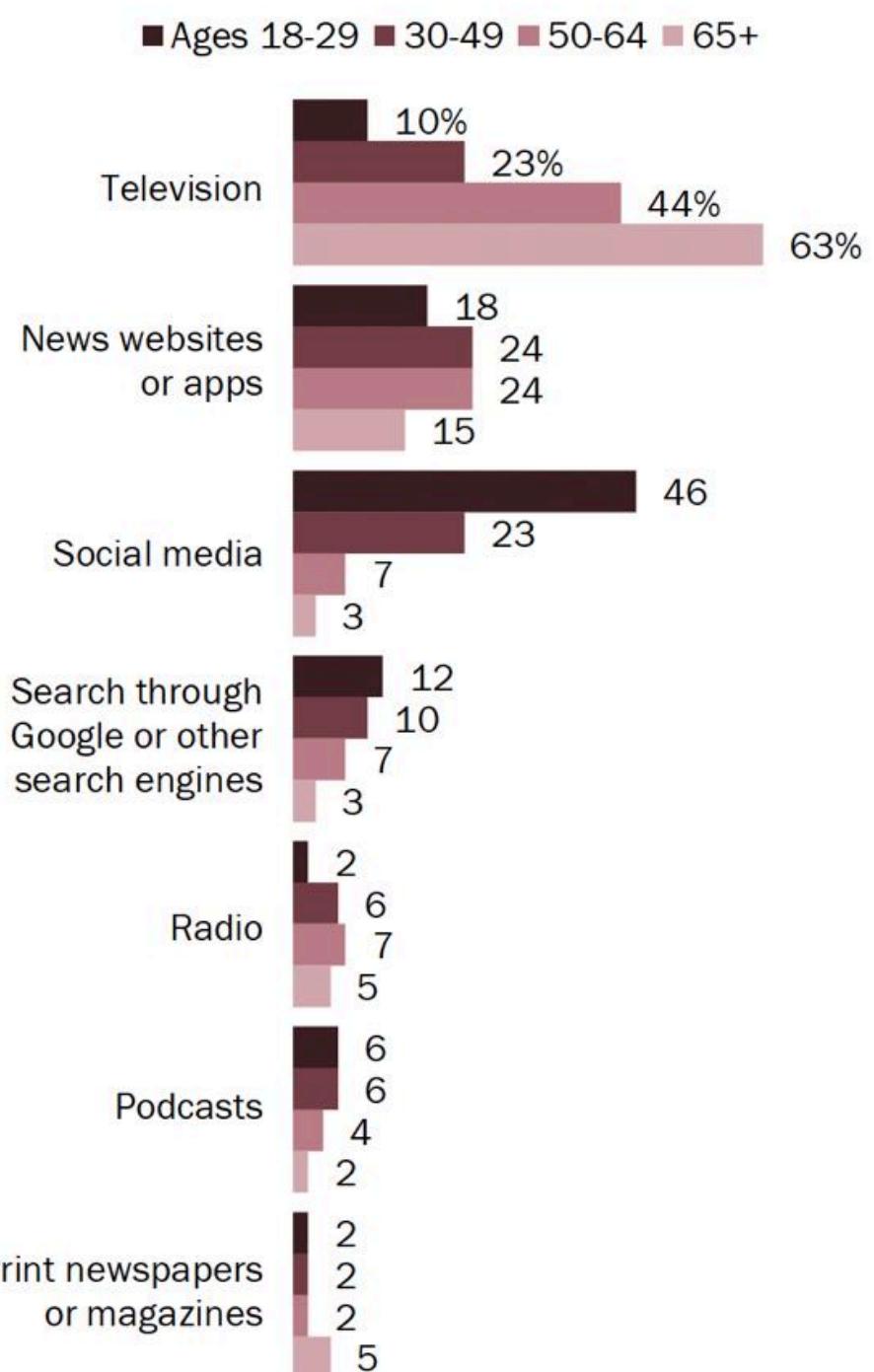


Figure 18. Prevalence of content manipulation types as a function of overall content manipulations. Percentages are computed as a proportion of (claim, image) pairs where a content manipulation has taken place. Plot created as in Fig. 11. Because windows containing fewer than 100 examples are not plotted, the left side of the plot is empty.

Lack of Liability on Social Media Platforms

% of U.S. adults who say ____ is the most common way they get political and election news, by age



Note: Respondents who did not give an answer or who said "Some other way" are not shown.

Source: Survey of U.S. adults conducted Sept. 16-22, 2024.
"Americans' Views of 2024 Election News"

Absence of AI-Powered Solutions in the Industry

Industry Vertical Analysis

BFSI dominates with 26.5% due to its inherent vulnerability to various types of financial frauds.

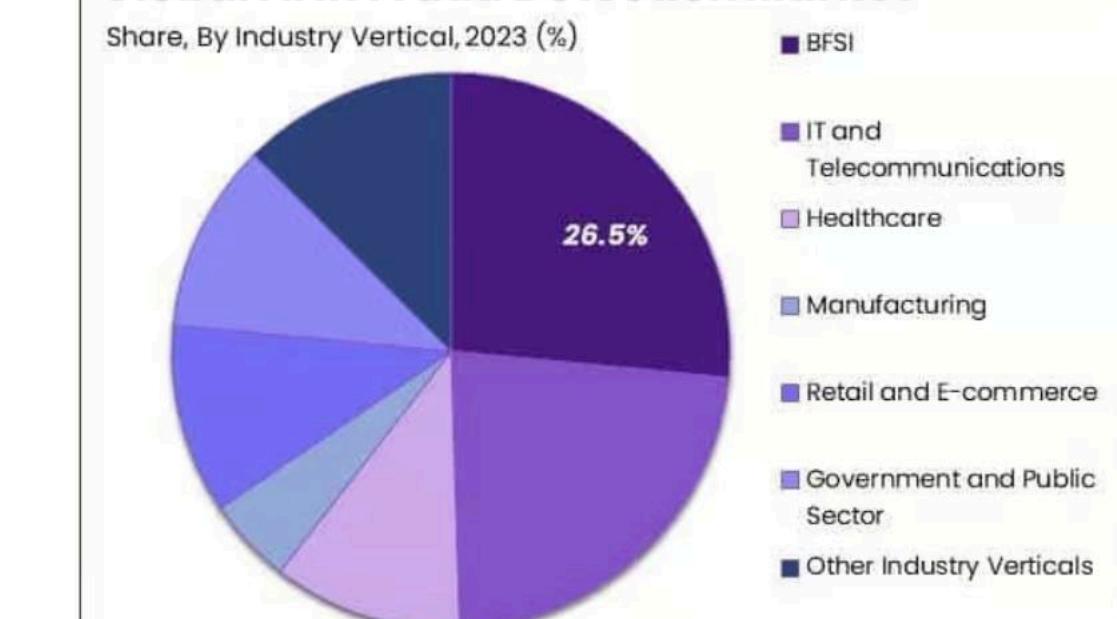
In the Industry Vertical analysis of the AI in Fraud Detection market, the BFSI (Banking, Financial Services, and Insurance) sector stands out, occupying 26.5% of the market. This dominance is driven by the sector's inherent susceptibility to various types of fraud, including but not limited to payment fraud, identity theft, and insurance claims fraud.

The complex nature of transactions and the vast amounts of personal and financial data handled by these institutions necessitate robust AI-driven fraud detection systems.

Other industry verticals like IT and Telecommunications, Healthcare, Manufacturing, Retail and E-commerce, and the Government and Public Sector also integrate AI solutions to combat fraud, tailored to their specific operational risks and regulatory requirements.

The leading role of BFSI in this market segment underscores the critical need for continuous advancements in AI capabilities to keep pace with the evolving sophistication of fraud schemes. As AI technologies advance, their integration into the fraud detection strategies of BFSI and other sectors is expected to become more pronounced, playing a pivotal role in safeguarding assets and maintaining trust in financial systems globally.

Global AI In Fraud Detection Market



Research Plan - Structure & Participants

| Methodology | | |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| 1:1 interviews (~30 min.) | | |
| Interview participants info | | |
| ID | Demographics | Interviewer |
| R01 | 30s, Female, Korean, PhD student | Yeeun |
| R02 | 30s, Female, Korean, PhD student | KyuEun |
| R03 | 20s, Female, Korean, PhD student | KyuEun |
| R04 | 20s, Female, American, MS student | Nishma |
| R05 | 20s, Female, American, MS student | Nishma |
| Interview questions | | |
| Question category | Questions | Probing questions (if needed) |
| Task-related questions | How would you describe your overall experiences using these tools? - Rate each tool on a scale of 1-5 - Ease of use (1=difficult, 5=easy) - Clarity of results (1=hard to understand, 5=clear results) | |
| | What do you think about the feedback/results provided by each tool? Were there any results that surprised you? If so, why? | |
| | What are the Features/Functions you liked, and why? | |
| | What are the difficulties or breakdowns you found while using these tools? What are the Features/Functions you would like to have, and why? (e.g. any missing features that you expected but didn't find) | |
| | Did you find yourself double-checking the tool's results elsewhere? How did you decide which articles/documents to fact-check? What factors influenced your decision when selecting images? | What would you typically do after checking the results? |
| Fact-checker tool related questions | What is the main reason that you would use a fact-checking tool? What would motivate you to use a tool like this regularly? | |
| | What kind of output/results would help you trust the tool's analysis? Would you prefer a mobile app, browser extension, or website for this tool? Why? | |
| General AIGC/Fake News related questions | Have you ever encountered fake news or manipulated images before? Can you describe the situation? How do you usually verify the credibility of online information? | How did you feel when you come across AI generated content? |

Interview Questions Grouping

- Task-related
- Fact-checking tools
- General AI generated content and fake news experiences

Interview Structure

1. Contextual Inquiry: We provided prompts and observed the participants navigate 3 different AI detection and fact-checking tools (GPT Zero, Google Fact Check Tool, and Sight Engine).
2. Post-task questions: We then asked the participants questions from the 3 categories above.

Research Plan - Structure & Participants

| Participant Number | Interviewer | Gender | Age | Nationality | Education |
|---------------------------|--------------------|---------------|------------|--------------------|------------------|
| R01 | Yeeun | Female | 30s | Korean | PhD |
| R02 | KyuEun | Female | 30s | Korean | PhD |
| R03 | KyuEun | Female | 20s | Korean | PhD |
| R04 | Nishma | Female | 20s | American | MS |
| R05 | Nishma | Female | 20s | American | MS |

Research Process

Observation & Interview Notes

| Tool | R02 - KyuEun | R03 - KyuEun | R04 - Nishma | R05 - Nishma | | |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GPT Zero | <ul style="list-style-type: none"> - Instead of clicking "upload", dragged and dropped the file on the screen (> after dragging the file on the black bar, leaves the file link) - Asked if it is ok to copy the text and paste - Mentioned that "there's no alarm or pop up indicating this" - Mentioned that she clicks "advance scan" (moved on to the next tab) to check the reasons behind the results - Compares her background knowledge on AI and tries to make sense of how the tool detects AIGC (e.g., perhaps it detects based on the sentence structure) - but it only shows the AI vocabulary) | <ul style="list-style-type: none"> - mistakenly dragged and dropped the pdf file on the black space - results does not show why the tool thinks some of the sentences is "high human probability impact" - compares her prior knowledge (grammar rules) to interpret the tool's results - thinks she can trust some of evaluations and claims from the article because the results cross-checked "a research company brought up | <ul style="list-style-type: none"> - Sees user friendly and simple - Don't need account, which is a plus - Results are pretty quick and it makes sense that the document she uploaded is human, because AI is usually wordy and has weird sentences | <ul style="list-style-type: none"> - Not sure how much to believe the results - Sometimes it says AI generated but it could real... you just have to trust it | | |
| Google Fact Check | <ul style="list-style-type: none"> - put the name of the city in I authentically - tries to search for the word - search for sources cited it to - tends to search phrases as sentence - as the tool does not come i keeps putting outside source - as the tool is not reliable - mentions that she cannot use tool is capable of | <p>Category # Question</p> <p>R01 - Yusun</p> <p>How would you describe your overall experiences using these tools?</p> | <p>R02 - KyuEun</p> <p>gpt zero seems to detect contractions and passive voice in sentences that appear human-written, which helps make sense of its pattern recognition. The second tool did not seem to have the same level of detection to recognize "Beaver County" as a citation. The third tool, however, detected information accurately.</p> | <p>R03 - KyuEun</p> <p>#1 While reading, I feel like it was a real article, and since GPTZero said it wasn't AI-generated, it seemed to align with my intuition. What I was curious about was which parts seemed AI-like. I went back and forth between the three results without explanation. However, I think it's useful for verifying whether something is real or fake by having multiple sources. The UI is also very clear and UI makes me trust more (as the sources are provided and I can check the details).</p> <p>#2 I don't see the difference between this and a Google search. Searching with just words feels like a Google search.</p> <p>#3 The reason I chose this image was because the expression and composition were different. It was a woman smiling and looking at the camera, while the other two were neutral expressions. However, the hands were awkward, which made me wonder why it was classified as AI-generated. The hands are too technical for my judgment, so I can't fully trust it.</p> | <p>R04 - Nishma</p> <p>Simple and straightforward (all 3).</p> | <p>R05</p> <p>It was pretty interesting though not exactly sure it makes her questic true. Checking AI info tool is not always mismarked, since it but just written differ not be accurate.</p> |
| Sight Engine | <ul style="list-style-type: none"> - she thinks that some photo knowledge (e.g. swifties do - while browsing results, she name of each model is - she wants to upload i where to go) | <p>Task-related questions</p> <p>1</p> <p>How would you describe your overall experiences using these tools?</p> | <p>Ease of use: GPTZero 4, Google Fact Checker 1, Sightengine 2</p> <p>- Ease of use: 4=easy, 5=hard to understand, 5=clear results</p> | <p>gtf zero - 4, 3</p> <p>- First tool: 3 – The basis for determining AI-generated content was not always clear and required close examination.</p> <p>google - 5, 3</p> <p>- Second tool: 4 – It displayed key claims in a single place, making it intuitive.</p> <p>sightengine - 3, 2</p> <p>- Third tool: 3 – Had issues with sign-up and lacked context in explaining why something seemed AI-generated, which was frustrating.</p> | <p>gtf zero - 5, 5</p> <p>- the first tool was reliable because it provided sources that I could verify with my own eyes.</p> <p>google: 4, 5</p> <p>sight engine: 5, 5</p> | <p>gtf zero: 5, 5</p> <p>google: 4, 3</p> <p>sight engine: 5, 5</p> |
| | <p>2</p> <p>What do you think about the feedback/results provided by each tool? Were there any results that surprised you? If so, why?</p> | <p>gtf zero attempts to provide a rationale for its detections, which aligns well with its intended purpose of identifying AI-generated content.</p> <p>Sightengine: It wasn't very useful except for the numerical information (e.g. how much the image is AI-generated).</p> <p>GPT 2.7: The search source feature seems useful if I have to judge whether the source is legit or not.</p> | <p>(gptzero) I found it fascinating that the tool quickly found sources and distinguished whether they were natural and key sources.</p> | <p>Results were interesting, but not surprising.</p> | <p>Not sure what the Q for. Thought you can tell you if it's fake or it's fake or not have relevant sources, but the Sight Engine toc standard!</p> | <p>In site engine, the as shows what it's from used to make the in trustworthy.</p> |
| | <p>3</p> <p>What are the features/functions you liked, and</p> | <p>GPT 2.7 is useful from a student's perspective. It's not convenient to use. The "basic" search feature has good visibility. The "basic" search feature has good visibility. However, I don't think the Sightengine interface</p> | <p>Google's fact-checking feature is useful because it doesn't just list related facts but also tells me whether what I'm reading is true or false. Among the tools, the first one stood out because of its sentence-based detection</p> | <p>(gptzero) The UI also felt trustworthy—it was clean and well-organized. The UI was clear, and a lot of content was available. It visually showed that a human wrote it, making the judgment process more transparent. I liked that</p> | <p>Didn't have to make account, user friendly, easy to read, clear instructions (for all 3).</p> | <p>In site engine, the as shows what it's from used to make the in trustworthy.</p> |

Interpretation Session

- Collected key data points during the interpretation session and extracted insights
- Categorized insights into Perception, Input, and Results stage, with themes for each (e.g., technical vocabulary for lay users, lack of sources, insufficient reasoning)

Research Process

Thematic Analysis assisted by ChatGPT

Insight Extraction

| Participant # | Product Name | Categories-Interview Questions | Interview Questions | Data Observations, Quotes | User Insights Pain points, Breakdowns, Benchmark, User behaviors | Design Ideas How might we, Features, Functionalities |
|-----------------------|---------------------|--------------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 GPT Zero | Task related | | | <ul style="list-style-type: none"> "It doesn't require an account, which is a plus" Interface is simple and basic (user friendly) | <ul style="list-style-type: none"> Not 100% trusting of the results | <ul style="list-style-type: none"> Build trust with the user Protect privacy of government clients' information, without impacting the experience for general users |
| 4 Google Fact Checker | Task related | Fact-checker related | | <ul style="list-style-type: none"> Unsure about what the use case is and what the results would be "It would be more effective if you could put longer text or a link" | <ul style="list-style-type: none"> It takes effort to figure out which key words to input Results are limited and don't have much explanation | <ul style="list-style-type: none"> Provide reasoning and break down the results, such as percentages, highlights, etc. |
| 4 Sight Engine | General | | | <ul style="list-style-type: none"> Not confident in what types of files are acceptable to upload | <ul style="list-style-type: none"> Results are a bit confusing to comprehend | <ul style="list-style-type: none"> Primary sources should be provided (all types of media) |
| 5 GPT Zero | Task related | | | <ul style="list-style-type: none"> "Sometimes when it says it is AI generated, it could be human-written. So it's hard to fully trust the results" | <ul style="list-style-type: none"> Quick results, but not 100% trustworthy | <ul style="list-style-type: none"> Link specific parts of the text with the sources |
| 5 Google Fact Checker | Task related | General | | <ul style="list-style-type: none"> "The interface feels off; knock-off Google design" Couldn't understand what this would be used for | <ul style="list-style-type: none"> Limited input (only up to 3 words) Only 2 results given, and not sure what to do with those results | <ul style="list-style-type: none"> Incorporate community, where you can participate in or view conversations on topics to aid in verifying (basically, get more perspectives) |
| | Google Fact Checker | Task 2 | | | | <ul style="list-style-type: none"> Relies on factual data like 'someone did what, said what' for fact-checking. |
| | Sight Engine | Task 3 | | | | <ul style="list-style-type: none"> Users rely on s evaluation-rat technical AI de metrics: |

Consolidated User Research Data + Thematic Grouping by Chat-GPT

| Thematic Grouping | Observation | Insights | Design Ideas |
|---------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Expectations for Feature Improvements | Users question AI-generated judgments and need clear reasoning. | Without explanations, users struggle to trust AI-generated content and rely on personal biases. | Provide AI-detection reasoning flagged content to enhance trust. |
| Expectations for Feature Improvements | Users struggle with understanding tool functionalities without onboarding. | Users often don't know how to use the tool at first or what it's meant to do. | Implement a guided onboarding explaining the tool's functions. |
| Expectations for Feature Improvements | Users rely on prior knowledge to interpret AI-generated content. | Without a clear explanation, users use their own mental models to make sense of results. | Provide explanations along with content to clarify why certain AI-generated results are valid. |
| Expectations for Feature Improvements | Users manually check multiple sources when a tool doesn't provide enough context. | Users cross-check information to verify credibility when AI outputs are unclear. | Incorporate credibility score validation to reduce user verification. |
| Expectations for Feature Improvements | Auto-suggested search queries would help users input better terms. | Users struggle to determine the best search terms when using fact-checking tools. | Implement an auto-suggestion feature that recommends optimized search input. |

Journey Map assisted by Claude.ai

Journey Mapping

| Stages | Discovery & Access | Input | Results |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| User Actions | <ul style="list-style-type: none"> Encounter information online Question content authenticity Search for verification tools | <ul style="list-style-type: none"> Select content to verify Attempt to input content Explore different input methods | <ul style="list-style-type: none"> Review analysis results Try to understand findings Look for additional information |
| Thoughts/Feelings | <ul style="list-style-type: none"> "Is this information real or AI-generated?" "How can I verify this?" "Not sure if my content format is supported" "Which tool is trustworthy?" | <ul style="list-style-type: none"> "How do I upload this?" "Not sure if my content format is supported" "Copy-pasting might be easier" | <ul style="list-style-type: none"> "What does this result mean?" "Hard to understand why this conclusion is drawn" "Need more detailed explanation" |
| Pain Points (Summary) | <ul style="list-style-type: none"> Unclear purpose and functionality Unintuitive interface design Lack of onboarding/guidance No batch processing capability Slow processing times | <ul style="list-style-type: none"> Lack of feedback during file upload Limited input options Unclear file type support Poor visual distinction between elements Missing explanations for AI detection Unclear rating systems | <ul style="list-style-type: none"> Technical jargon hindering comprehension Lack of context for results Hard to understand why this conclusion is drawn Need more detailed explanation |
| Opportunities (Summary) | <ul style="list-style-type: none"> Create clear purpose statements and intuitive onboarding Design trustworthy, professional interface Provide tool scope definition upfront | <ul style="list-style-type: none"> Support multiple input methods (drag-drop, copy-paste, URL) Provide clear visual feedback on input actions | <ul style="list-style-type: none"> Use color coding and visual indicators Provide plain language explanations Include tooltips for technical terms |

Findings - Thematic Analysis 1

User Insights

Expectations for Feature Improvements

- Without explanations, users struggle to trust AI-generated content and rely on personal biases.
- Users often don't know how to use the tool at first or what it's meant to do.
- Without a clear explanation, users use their own mental models to make sense of results.
- Users cross-check information to verify credibility when AI outputs are unclear.

Fact-Checking & Verification Behavior

- Fast, accurate source validation builds user confidence in the tool's credibility.
- Users expect fact-checking tools to highlight concrete events rather than general statements.
- Users prefer an integrated fact-checking experience rather than inputting text manually each time.

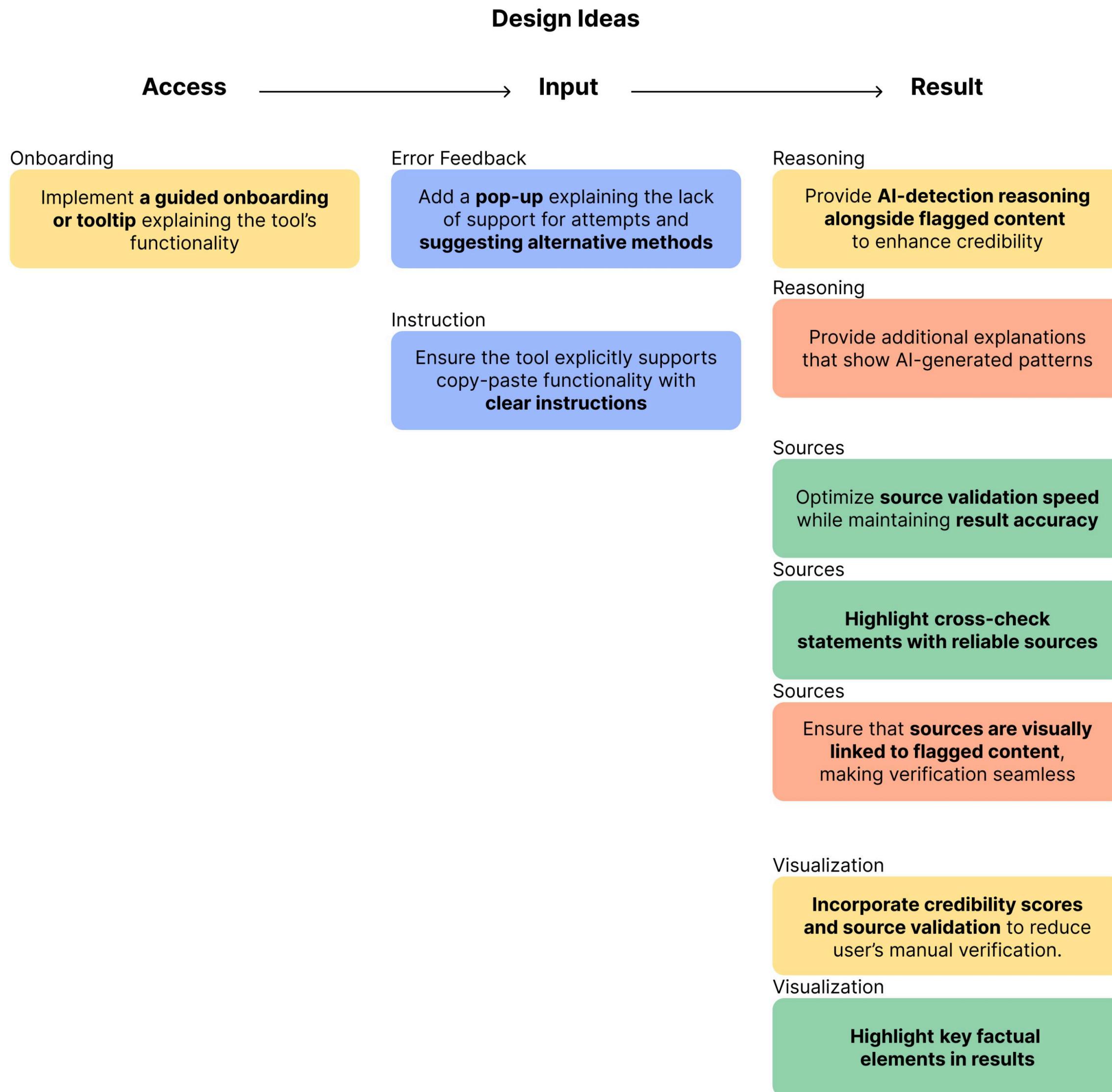
Trust & Transparency in AI Detection

- A clear, structured interface reinforces trust in the tool's results.
- Users want to see concrete AI-generated patterns (e.g., frequently used words by AI).

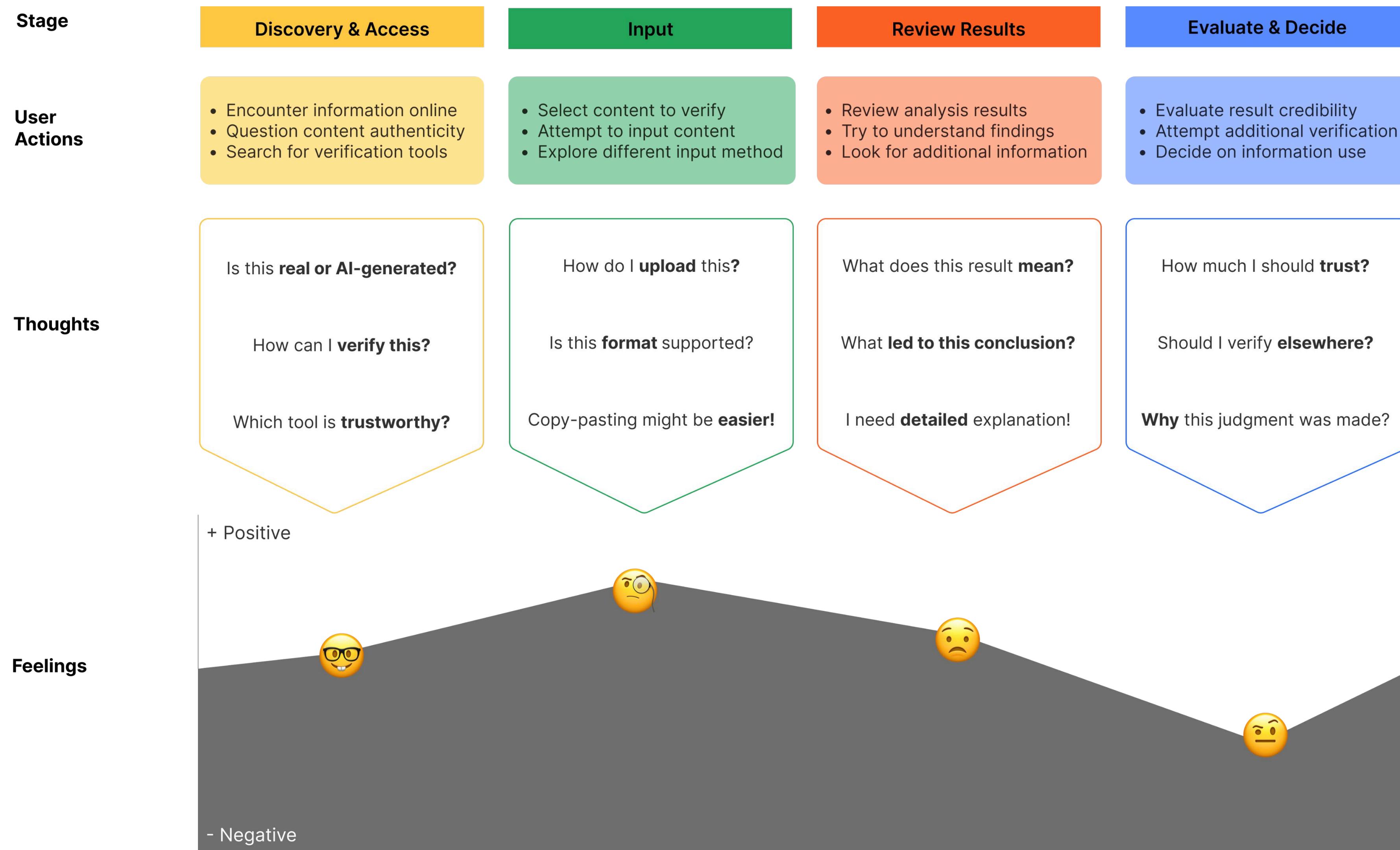
Usability & Interaction Barriers

- Users expect drag & drop functionality even when it's not supported.
- Input methods (e.g., copy-paste vs. upload) affect ease of use.

Findings - Thematic Analysis 2



Findings - Journey Map 1



Findings - Journey Map 2

Discovery & Access → Input → Review Results → Evaluate & Decide

Pain Points

| | | | |
|-----------------------------|--------------------------------|--------------------------------|--------------------------------|
| Unintuitive home interface | No feedback after file upload | Technical jargon | Not confident in tool accuracy |
| Lack of onboarding guidance | Limited Input Options | Lack of context for results | AI-generated fake sources |
| | Limited Input Options | Unclear file type instructions | Cross-reference verification |
| | Unclear file type instructions | Poor visual distinction | |
| | | Lack of sufficient reasoning | |
| | | Unclear rating system | |

Opportunities

| | | | |
|--------------------------|----------------------------------|----------------------------------|---------------------------------|
| Clear purpose statements | Multiple input methods | Color coding & visual indicators | Confidence scores with reasons |
| Intuitive onboarding | Visual feedback on input actions | Plain language and explanations | Consolidated source vieweing |
| Professional interface | Display supported file types | Tooltips for technical terms | Cross-verification |
| Tool scope definition | | Highlight detected elements | Direct links to primary sources |
| | | Clear rating visualization | |

Thank You