

VANITY – AI FACT CHECKING WEB APP

FULL DETAILED PRESENTATION CONTENT (30 SLIDES)

Slide 1 – Title

Vanity is an AI-powered fact-checking web application designed to combat the rapidly growing misinformation problem in India. It verifies claims across text, images, and URLs using Google Fact Check API and an LLM (Large Language Model) that generates clear, simple summaries for users. It is built as part of the Innovation and Design Thinking course at BMS Institute of Technology & Management.

Slide 2 – Introduction to the Project

Vanity helps users instantly verify the authenticity of claims spreading across social platforms such as WhatsApp, Instagram, and X. It handles multiple formats—text, screenshots, and links. The goal is to give every user a fast, reliable tool to avoid spreading misinformation and make informed sharing decisions.

Slide 3 – Background

India experiences one of the highest misinformation circulation rates. Fake news related to politics, health, and social issues spreads faster due to WhatsApp groups and fast-reacting platforms. Manual verification is too slow for average users. Tools like AltNews and BOOM exist but require searching manually and often support only textual fact-checking. Vanity bridges this gap through automation.

Slide 4 – References

The project is built upon insights from: Google Fact Check Tools API documentation, AltNews India fact-check archives, BOOM Live investigations, WHO's Infodemic research, UNICEF studies on social misinformation, and technical references like FEVER fact-checking dataset research.

Slide 5 – A11: Objectives of Understand Phase

The goal of the Understand Phase was to deeply analyze the misinformation ecosystem. Objectives included identifying common misinformation patterns, understanding how users consume viral content, analyzing technical feasibility of automated fact verification, and defining what features matter most for the MVP (Minimum Viable Product).

Slide 6 – A12: Search Field Determination

Market-oriented search: India has heavy WhatsApp and Instagram usage, creating a high demand for quick verification tools.

Technology-oriented search: Availability of APIs, LLMs, OCR, and MERN stack capabilities.

Competence-oriented search: The development team has experience in React, Node.js, MongoDB, API integration, and designing usable web interfaces.

These three directions confirmed the technical and societal viability of Vanity.

Slide 7 – A13: Questionnaire

The questionnaire revealed key insights:

- 70% rarely verify claims before sharing.
- 55% said images/screenshots are the hardest to verify.
- Most users expect verification within 5–10 seconds.
- Trust is mostly based on the sender, not the source.

These findings heavily shaped the design decisions for Vanity.

Slide 8 – A14: Problem Clarification

Using the Kepner-Tregoe model, the root problem was identified: misinformation spreads because verification is slow, scattered, and confusing. Most users do not know where or how to validate a viral claim. Vanity solves these pain points through speed, simplicity, and multi-format support.

Slide 9 – A15: Blind Spots

Users are often unaware of credible fact-checking sources. Many rely on clickbait headlines that distort actual information. There is little understanding of how to check reverse-image metadata or cross-reference sources. Vanity addresses these blind spots through transparent evidence and clear summaries.

Slide 10 – A16: PESTEL Analysis

Political: Fake political claims affect elections.

Economic: Free tools help reduce misinformation in lower socioeconomic regions.

Social: Viral content influences emotions and decisions.

Technological: AI + APIs make automation possible.

Environmental: Digital-only, minimal footprint.

Legal: Increasing pressure on platforms to regulate misinformation.

Slide 11 – A17: Ishikawa Diagram

Human: Confirmation bias, low media literacy.

Media: Sensationalism, misleading thumbnails.

Technology: Deepfakes, bot networks.

Process: No verification habit.

Environment: Echo chambers in social groups.

This cause–effect breakdown shows why misinformation spreads so easily.

Slide 12 – A18: Conclusion of Understand Phase

The Understand Phase confirmed the urgent need for a fast, AI-assisted fact-checker that works for text, images, and URLs. Vanity’s concept was validated: a simple interface backed by evidence and fast automated checking.

Slide 13 – A21: Objectives of Observation Phase

The observation phase aimed to monitor how real users interact with misinformation. The goal was to identify friction points, measure user response time, observe emotional triggers, and validate whether an automated fact-checker would genuinely solve the issue.

Slide 14 – A22: Tips for Observing

Key observation strategies included:

- Avoid influencing user behavior.
- Track sender and platform of claims.
- Observe reaction patterns like share, comment, or forward.
- Identify why users believe certain claims quickly.

Slide 15 – A23: Dimensions of Descriptive Observation

Observation focused on the type of content (text, meme, screenshot), context of sharing (sender credibility, platform), user reaction, and frequency of repeated content. Repeated exposure increases belief, which Vanity aims to counter.

Slide 16 – A24: Customer Experience Factors

Users need:

- Fast output (less than 10 seconds).
- Simple explanation of verdict.
- Trusted links to official sources.
- Clean, minimalist UI.
- Support for multiple input types.

Slide 17 – A25: Empathy Map

Think: "Is this real?"

Feel: Confused or curious.

Say: "Should I forward this?"

Do: Share without verifying.

This mapping shows the psychological journey during misinformation exposure.

Slide 18 – A26: Cognitive Walkthrough

User flow:

1. User submits a claim.
2. Backend checks Google Fact Check API.
3. LLM generates a natural-language verdict.
4. User reviews the summary.
5. User decides to share or not.

This flow ensures speed and clarity.

Slide 19 – A27: Heuristic Evaluation

Interface evaluated on:

- Feedback and status visibility.
- Familiar terminology for non-technical users.
- Error prevention when inputs are invalid.
- Consistent UI and interaction patterns.

Slide 20 – A28: Critical Incidents

Examples:

- Viral image lacked context → solved with OCR.
- Conflicting fact-checks → solved by showing multiple sources.
- Slow responses → solved with caching.

These shaped the final design.

Slide 21 – A20: Field Visit & Interaction

User interviews revealed:

- Most users trust the sender more than content.
- They want extremely fast checks.
- Students rely on WhatsApp forwards heavily.
- A simple “paste & verify” flow is preferred.

Slide 22 – A29: Observation Phase Conclusion

Main insights: users care about speed, clarity, and trusted sources. They prefer an automated all-in-one tool. These insights validated Vanity’s MVP direction.

Slide 23 – A31: Objectives of Define Phase

Define Phase focused on converting all insights into practical product requirements: selecting top features, designing architecture, choosing tech stack, and aligning the problem statement accurately.

Slide 24 – A32: Point of View (POV)

“A social media user needs a fast, trustworthy way to verify claims so they can avoid spreading misinformation online.”

Slide 25 – A33: Persona

Persona: Arjun, 20 years old, student.

- Shares content frequently.
- Uses WhatsApp, Instagram, and X.
- Needs: clarity, speed.
- Pain points: clickbait headlines, misleading images.

Slide 26 – A34: Checklist for Customer Problems

Checklist questions:

- Can the user verify in under 1 minute?
- Is the source visible and credible?
- Is the verdict understandable?
- Does it support images, URLs, and text?

Slide 27 – A35: Needs and Wishes

Users want:

- Multi-format verification.
- Simplified UI.
- Transparent explanation.
- Trusted publication sources.
- Easy sharing of verified output.

Slide 28 – A36: Cognitive Ladder

Functional: verify claim.

Psychological: confidence.

Instrumental: reduced misinformation.

Terminal: safer society.

Slide 29 – A37: SDG Alignment

Vanity supports **SDG 16: Peace, Justice, and Strong Institutions**.

By promoting accurate information, it contributes to societal stability and digital literacy.

Slide 30 – A38: Conclusion of Define Phase

Vanity's MVP is fully defined. It meets user needs, uses reliable technology, and addresses a crucial social problem. Ready for prototyping, testing, and deployment.