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# Evaluating AI's Role in Combating Fake News in India: A Study

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ABSTRACT

This research examines AI's role in addressing fake news in India's digital landscape, employing a mixed-method approach. Phase 1 involves a survey among 20-40-year-olds, revealing limited awareness of fact-checking resources and AI tools, with most relying on internet news sources. Concerns about AI's impact on news fairness are raised despite support for regulations. Expert interviews, including insights from Dr. Archana Kumari (Assistant Professor, JNU) emphasises defining fake news precisely and enhancing journalism with AI, suggesting governments leverage AI to combat misinformation. The study concludes by advocating for a nuanced understanding of AI's potential in digital journalism, presenting advantages, disadvantages, and solutions, thereby contributing to a comprehensive discourse on AI and fake news within India.

## Introduction

Artificial intelligence (AI) is an ever-expanding field, transcending its initial confines of science and research. AI, which enables machines to perceive, learn, reason, and solve problems in ways akin to human intelligence, is revolutionising various industries, including healthcare, finance, transportation, and entertainment.

In the realm of news media, AI proves exceptionally beneficial. In India, 23% of adults rely on digital and social media as their primary news source daily (Data Reportal 2024). Analysing the ownership and sources of this news is critical to evaluating its accuracy and credibility.

"Fake News" describes the dissemination of misinformation, often deliberately crafted to deceive (Mridha et al., 2021). This phenomenon undermines ethical journalism and disrupts the news cycle. While human intelligence is invaluable, it is susceptible to biases (Jones & Nisbett, 1971). Major events such as Trump's 2020 election fraud claims, the 2022 Ukraine invasion, and the Israel-Hamas war highlight the rapid spread of misinformation. Despite these challenges, many people believe they can discern real news from fake, though confidence levels vary across countries (Ipsos Japan).

AI and machine learning (AIML) strive to emulate human cognitive functions, including emotional understanding. The integration of AI in digital media streamlines content creation and enhances fact-checking mechanisms. However, generative AI poses significant risks by easily producing fake images and text.

This research focuses on the adult population in urban India, who regularly access digital media, examining AI's potential to combat fake news. By studying the Karnataka Government as a case study and employing both secondary and primary (interview) research methods, this study aims to propose solutions to this growing issue.

### Theoretical Framework

This research strategically navigates the intricate dynamics of the Indian digital media landscape by

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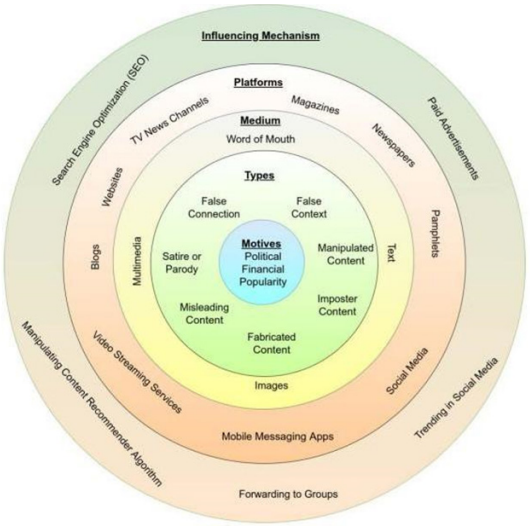


**Figure 1:** Fake News Characteristics (Gupta A. et al., 2022)

exploring the role of Artificial Intelligence (AI) in combating fake news. The framework encompasses key theoretical perspectives and constructs that inform the study's objectives, namely, to explore the advantages and disadvantages of Al in addressing fake news and to evaluate potential solutions through Al integration.

## Bias Confirmation

An important concept, and notion, essential to understand the rationale behind the popularity of fake news consumption. It is people's tendency to process information by looking for, or interpreting, information that is consistent with their existing beliefs. This biassed approach to decision making is largely unintentional, and it results in a person ignoring information that is inconsistent with their beliefs (Casad, B. J. & Luebering,. J.E., 2024).

Its relevance for this research is essential to gauge the tenet behind the clickability, accessibility and shareability of any content available on digital platforms. During an in-depth interview with Dr. Mou Mukherjee on June 19, 2024, a media studies expert and certified fact-checker from Factshala, she emphasised on bias confirmation as the top reason why certain sections of the society especially elderly people with access to smartphones and news on digital platforms tend to form ingrained beliefs about reported events/occurrences. She elaborated on how algorithms are designed to confirm this bias through Natural Language Processing (NLP). This field of AI, allows the machine to understand, interpret and generate content very similar to human language.

Technological determinism, as a concept, has its roots in the early to mid-20th century, but it was notably advanced by scholars like Neil Postman in the latter half of the century. Neil Postman, particularly in his book "Technopoly: The Surrender of Culture to Technology" (1992), explores the idea that technology shapes societal structures and behaviours. In the context of this research, we employ Technological Determinism to explore how AI, as a disruptive force, may shape the dynamics of fake news dissemination, detection, and mitigation within the digital sphere of Indian media.

By synthesising these theoretical perspectives, this research aims to navigate the complexities of the Indian digital age, providing a comprehensive understanding of the advantages and disadvantages of AI in combating fake news, and offering insights into the challenges and potential solutions associated with the integration of AI in the Indian digital media landscape. This theoretical framework lays the groundwork for empirical investigation and analysis, contributing to the ongoing discourse on the intersection of technology, media, and information authenticity.

## Fake News in India's capacity

Studying fake news and its mitigation is crucial in India's political, social, cultural, and global contexts. Politically, fake news can manipulate public opinion, influence election outcomes, and destabilise democratic processes. In the 2019 General Elections, misinformation polarised communities and incited violence through false claims about voting procedures and fake endorsements (The Guardian, 2019).

Socially, fake news erodes trust in institutions and the media, fostering cynicism and division. Cultural implications are significant as well, with misinformation often targeting and exacerbating religious and ethnic tensions in India's pluralistic society. During the COVID-19 pandemic, misinformation about the virus, treatments, and vaccines spread widely, causing confusion and risky behaviour, and undermining public health efforts. False claims, such as cow urine curing COVID-19 and vaccines being unsafe for pregnant or menstruating women, fueled dangerous behaviours and vaccine hesitancy (The New York Times, 2021).

Globally, the spread of fake news can tarnish India's reputation as the world's largest democracy and an emerging economic power. It undermines the credibility of Indian journalism and official statements, affecting international relations and trade. During the pandemic, false narratives damaged India's reputation for transparency and competency, impacting foreign relations and global investment. Thus, awareness of both fake news and means to curb it must be made common knowledge. Including AI in education, journalism and digital literacy must now become essential more than voluntary. Integration of AI in certain detection tools is a step towards improving technology and thus, it must be treated with urgency.

## Relevance of the study

The research focus of the study on harnessing Artificial Intelligence (AI) to combat the dissemination of false information aligns seamlessly with the evolving

technological terrain shaping India's digital landscape.

AI presents a transformative opportunity to develop sophisticated instruments and algorithms capable of discerning between verifiable facts and fabricated content. By delving into the potential of AI to enhance media literacy, the study addresses a critical need in today's digital age. Empowering individuals with the ability to critically evaluate information encountered online is paramount, given the omnipresence of misinformation in digital spaces (Darwin, Rusdin, D., Mukminatien, N., Suryati, N., Laksmi, E. D., & Marzuki., 2023).

In essence, the exploration of AI's role in countering fake news not only reflects the technological zeitgeist of India's digital revolution but also underscores the imperative of leveraging advanced tools to safeguard the integrity of information in an increasingly digitised society.

## Research Methodology

### Objectives

- To investigate the advantages and disadvantages of Artificial Intelligence (AI) in combating fake news in Indian digital media.
- To assess the solutions of AI integration in Indian digital media.

### Target Audience

20-40 years of age residents of urban Delhi area

This research follows a mixed methodology of research employing both primary and secondary means of research. Before delving into the specifics of this research, mentioned below is a brief explanation of what these methods are.

Mixed methodology combines both qualitative and quantitative methods to gather and analyse data. It allows for a comprehensive understanding of the research topic by utilising multiple sources of data and perspectives.

### Questionnaire

A questionnaire survey uses structured questions to collect quantitative data efficiently from a large sample. It can be distributed electronically or in-person. The responses provide numerical data for statistical analysis to identify patterns, trends, and correlations. This survey targeted 150 respondents, selected through convenience sampling from urban areas of Delhi, aged 20-40, and active digital media users.

### Interview

Interviews involve in-depth conversations with selected individuals to gather qualitative insights on the research topic. They can be structured, semi-structured, or unstructured, depending on the needed flexibility. Interviews provide deeper insights into participants' experiences, opinions, and attitudes that may not be captured through quantitative surveys. Thematic analysis of interview data identifies recurring themes and patterns for a richer understanding. Two expert interviews were conducted with media professionals, journalists, and AI specialists to gain diverse insights into AI's application and impact in combating fake news.

Secondary research involved collecting and analysing existing data from sources like academic journals, books, reports, and online databases. This method leverages existing knowledge relevant to the research topic, providing valuable insights, historical context, and supporting evidence. Researchers can evaluate and synthesise this data to build upon existing knowledge and contribute new insights to the field. By combining primary and secondary research methods, researchers can triangulate data from multiple sources, validate findings, and gain a more holistic understanding of the research topic. Mixed methodology enables researchers to leverage the strengths of both quantitative and qualitative approaches, enhancing the credibility, depth, and richness of the research findings.

A sample frame was created to ensure the selected group accurately reflects the population's characteristics. This process ensures the validity and generalizability of findings, allowing the study to be completed in a manageable time with adequate resources and minimised logistical constraints. Sampling also reduces biases and errors, leading to more reliable insights and meaningful conclusions about broader phenomena (Trochim, W. M. K., 2006). The sample frame for this research includes a population with a basic access to news on digital media. Social media, educational institutions and personal networks were used as sources for the stratified random sampling.

### Survey

A survey was conducted using Google Forms to explore public perceptions of AI's role in addressing fake news in digital media. The survey consisted of ten objective-type questions, including those assessing trust in AI's ability to identify fake news, opinions on the need for regulations or guidelines for AI use in combating fake news, and concerns about potential bias in AI algorithms affecting news content fairness and objectivity. The survey was disseminated via social media and personal networks, targeting individuals aged 20-40 years old in Delhi, with the majority of respondents falling in the 20-25 age range. This provided valuable insights into the views of a younger, digitally engaged demographic. The analysis thus achieved was through the platform used to create the survey thus presented in a graphical means of visualisation. Once responses were collected, a summary of results was prepared and a data-based analysis was created.

### Questionnaire Results Obtained

The questionnaire results are presented through various graphs, such as pie charts and bar graphs. For example,

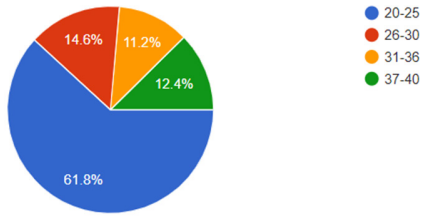


**Figure 2:** Age


**Figure 3:** How often do you look up "news" on the internet ?

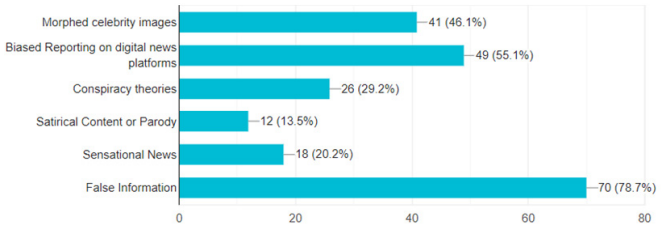


**Figure 4:** What do you consider fake news?

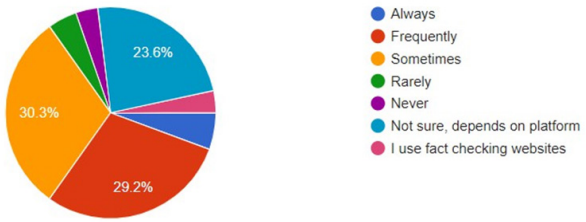


**Figure 5:** How often can you recognize fake news on these platforms?

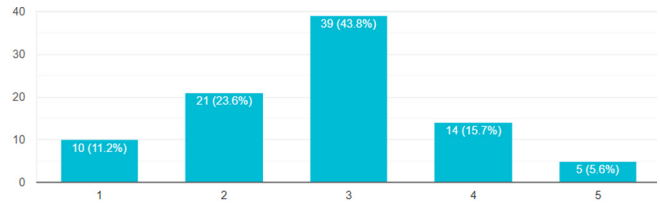


**Figure 6:** How much trust do you have in AI's ability to identify fake news in digital media ?

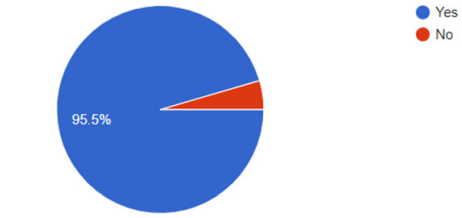


**Figure 7:** Should there be specific regulations or guidelines for the use of AI in addressing fake news in Indian digital media?

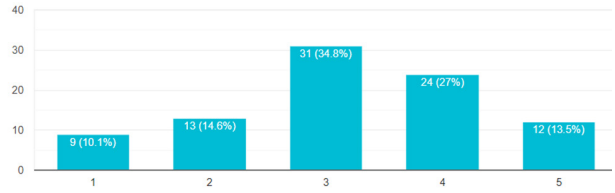


**Figure 8:** On a scale of 1 to 5, with 1 being "Strongly Disagree" and 5 being "Strongly Agree," rate the effectiveness of AI in delivering personalised and relevant news content to readers

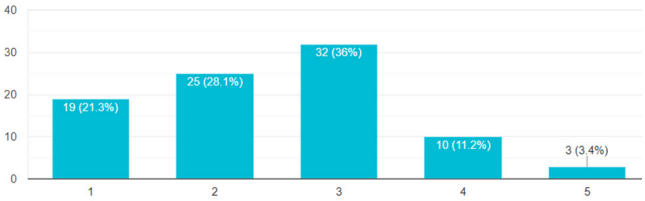


**Figure 9:** To what degree does AI reduce the human touch or editorial oversight in news production? (1-5 rating)

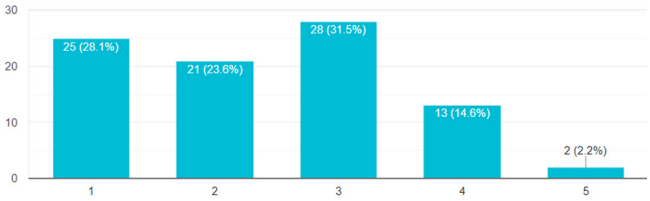


**Figure 10:** On a scale of 1 to 5, how concerned are you about potential bias in AI algorithms affecting the fairness and objectivity of news content?

Figure 2 shows most respondents are aged 20-25, while Figure 3 illustrates how often they seek news online. Figure 4 highlights common perceptions of "fake news." Additionally, Figure 8 measures the effectiveness of AI in addressing fake news, with most respondents agreeing on its importance. These graphs offer a clear overview of key trends and insights from the data collected.

## Graphical Inference

Majority of our respondents belong to the age group of 20-25. Hardly any of the responses display awareness towards fact-checking websites and AI-powered tools. Nearly half of our demographic looks up "news" every

day on the internet with the main source of news is News apps. 79% of respondents considered fake news to be the same as false information. A majority supports specific regulations for AI in countering fake news in Indian digital media.

Half believe AI diminishes the human touch in news production, raising concerns about algorithmic impact on fairness and objectivity of news content

## Personal Interview

An online interview was conducted with Dr. Archana Kumari, a media professor at Jawaharlal Nehru University, New Delhi. She has academic proficiency in the field of journalism and mass communication and a certified Google Scholar for fact-checking. With the help of this expertise, she decoded the meaning and usage of fake-news and how it has become a colloquial term in India. As a fact-checker herself, she gave great insight on existing platforms that help fact-checkers and even a daily news-consumer[3] to verify images available as "news".

It becomes relevant now, more than ever, to study this bi-directional transaction between AI and the sphere of media. The evolution of generative AI is happening at a faster pace than the common consumer can imagine and hence the need for awareness, action and implementation. AI acts as a dual-sided sword in the field of digital media creating an "infodemic" (Gupta A. et al., 2022) across platforms. The ease with which fake news can be created and propagated makes it extremely challenging to detect and mitigate. To combat the fake news, the researchers have utilised mechanisms which are largely based on Artificial Intelligence (AI) algorithms and social network analysis.

In the second phase of the research, upon conversing with Dr. Mou Mukherjee, it was highlighted that critical thinking of the newsmaker and consumer alike, is key to the process of not succumbing to the trap of fake news. It is essential to also note the themes of "news" often twisted as fake. It will never target the status quo but only a conflicted or common sentiment such as nationalism and communalism. The strategic outflow of misinformation is in tandem with a strategic timing, objective and place.

## Advantages of AI in Digital Media: Fact Checking and more

Artificial intelligence, if looked at from a lens of functionality, is used for the ease of generating content primarily for programming, self-writing and self-modifying (Bhusale, S., & Pujari, V., 2020). Apart from digital news media, AI has its realm of uses in the field of education, automobile, social-media and ecommerce - pillars of the society without which the 21st century cannot be imagined. On a more pragmatic level, AI has its share of affirmations such as its easy deployment, range of use (from mining to social media algorithms) and productive automation of mundane tasks.

The social penetration of AI is much faster than the common man may believe, voice assistants like Siri, Google etc. which are widely used in day-to-day activities are indeed AI based models in mobile phones. Today, the scope of AI is its Narrow Generative Zone which is (not limited to) generation, suggestion and information. For example, a growing media house works majorly towards volume of stories, and this is where AI comes in handy - furthering both business and content needs, as a result, the accuracy of stories is more likely to increase. AI tools can handle large amounts of data, information and facts with larger scalability thus increasing the efficiency of tasks. Critical literacy with an intention to actually enable human intelligence is the true purpose of a machine language such as AI (Mukherjee, M., 2024)

However, the responsibility for ensuring factual accuracy alongside speed and volume lies squarely with developers. As AI tools continue to evolve and proliferate, developers must uphold the highest standards of accuracy and reliability, safeguarding the integrity of information disseminated through AI-driven platforms. By prioritising factual accuracy in AI-powered content generation and dissemination, developers can ensure that AI remains a force for good in shaping a more informed and trustworthy digital landscape.

Effective audience interaction tends to ease the process of communication through AI ChatBots and more such tools. In the case of digital media, tools may be used for fact checking.

Non-AI based fact-checking tools and websites that enable smart keyword searches include several from Google:

- Google Fact Check Explorer
- Fact Check Markup tool
- ClaimReview
- Google Fact Check Markup API

These tools offered by Google are accessible to all digital media consumers on a public platform. To make this a common knowledge, the Google News Initiative conducts workshops among the youth across countries in a decentralised manner in order to spread the need for authenticity on digital platforms reinforcing the need to combat misinformation and fake news. Similarly, Ms. Archana Kumari, a fact-checking expert, mentions tools like Lens, Foo.com. Mapillary etc., for verifying images and visuals available as "news" on digital platforms. They work to bust myths and separate AI generated content like DeepFakes[6] from real images often used in an isolated context to generate misinformation.

## Contribution of AI in detection

Artificial Intelligence will only make these platforms more efficient and an aid for identification of fake news across platforms. It seems to act as a bridge between human intelligence and machine capacity through automation. "Data" and "digital" both being the backbone of Artificial

Intelligence (AI), one cannot exist without another and hence AI penetration in fact-checking tools will increase efficiency, accuracy and convenience.

AI can play a crucial role in content moderation on social media platforms and online forums. By employing AI-powered algorithms to detect and remove fake news, hate speech, and misinformation, platforms can create safer and more trustworthy online environments. These algorithms can analyse content at scale, identifying patterns and trends indicative of malicious intent or misinformation campaigns, and take proactive measures to mitigate their impact.

Moreover, AI-driven recommendation systems can help reduce the spread of fake news by prioritising content from reliable sources and diversifying users' news feeds. By leveraging user preferences, engagement patterns, and feedback signals, these systems can personalise content recommendations while minimising the amplification of misinformation. Additionally, AI algorithms can detect echo chambers and filter bubbles, encouraging users to encounter diverse perspectives and challenging their preconceptions. By leveraging advanced algorithms and data-driven approaches, AI technologies empower individuals, platforms, and policymakers to address the challenges posed by misinformation in the digital age.

In addition to its pivotal role in content moderation and recommendation systems, Artificial Intelligence (AI) holds promise in augmenting the journalistic process itself, contributing to the creation of more accurate and reliable news content. AI-powered tools can assist journalists in sifting through vast amounts of information, identifying credible sources, and fact-checking claims in real-time. By automating routine tasks such as data analysis and verification, AI streamlines the journalistic workflow, enabling reporters to focus their efforts on investigative journalism and in-depth reporting.

Furthermore, AI-driven technologies like natural language processing (NLP) and sentiment analysis can provide valuable insights into public discourse and sentiment surrounding news topics. By analysing social media posts, comments, and other online interactions, AI algorithms can gauge the authenticity and virality of news stories, helping journalists prioritise their coverage and address emerging narratives effectively.

Moreover, AI-generated content, such as automated news articles and summaries, presents opportunities for enhancing news distribution and consumption. These AI-generated outputs can provide users with personalised news updates tailored to their interests and preferences, thereby fostering greater engagement and understanding of current events.

By harnessing AI's capabilities in content creation, analysis, and distribution, news organisations can enhance their reporting practices, foster greater trust with their audience, and combat the spread of misinformation more effectively in the digital age. As AI continues to evolve, its integration into journalistic workflows holds immense potential to revolutionise the news industry and uphold the integrity of information dissemination in society.

As per Dr Mukherjee's insights, it is true that the intention behind the usage of AI is key to the outcome it may relay. Keeping in mind, the ethics, morals and values create data points which are beneficial and end up helping the human race instead of proving itself to be a bane.

## Negative Impact of AI: Generation, Spread, Identification

Concerns have been raised about how recent advancements in generative AI could "trigger the next misinformation nightmare" (Gold, A. & Fischer, S., 2023), that people "will not be able to know what is true anymore" (Metz C., 2023), and that we are facing a "tech-enabled Armageddon" (Scott L, 2023).

Artificial intelligence (AI) technology will make it simpler to produce fake or misleading content that is realistic at scale. This might have disastrous effects on people's attitudes and actions, the public sphere of information, and society. AI facilitates the creation of misinformation, potentially increasing the amount of fake news available. AI can help create misinformation that is more persuasive than that created by current means. For instance, in the same way as generative AI can create a text in the style of a limerick or of a particular author, generative AIs could create content that looks more reliable, professional, scientific, and accurate (by using sophisticated words, the appropriate tone, scientific looking references, etc.). (Simon, F. M., Altay, S., & Mercier, H. , 2023)

AI will simplify the process of creating and microtargeting individuals with customised false information that appeals to their interests and convictions, hence increasing the likelihood of convincing or deceiving them.

An overreliance on AI for the detection of fake news could create a false sense of security, necessitating a balance with human oversight and critical thinking to assess the credibility of information. Ethical concerns, such as privacy issues related to extensive data collection in certain AI applications, further complicate the landscape. Striking a balance between combating misinformation and preserving privacy rights is essential to ensure responsible and ethical use of AI technologies. Unintended consequences, such as potential impacts on free speech and concerns about censorship, add layers of complexity to the ethical considerations surrounding the use of AI in addressing misinformation.

In a new report released by Freedom House, a human rights advocacy group, researchers documented the use of generative AI in 16 countries "to sow doubt, smear opponents, or influence public debate."

In 2019, during the Belgian federal election campaign, a Flemish socialist party, created a deep fake video featuring Donald Trump, the then-President of the United States. The video aimed to criticise and advocate for action on climate change by simulating Trump making a statement in support of Belgium and its climate policies.

This deepfake video demonstrated the potential for AI-generated content to manipulate public perception and influence political discourse. The video's realism raised concerns about the ability of viewers to discern between authentic and manipulated content, showcasing the challenges posed by deepfake and AI technology in the context of fake news. The incident underscored the need for enhanced detection methods and regulations to address the evolving landscape of deceptive AI-generated content, particularly in the realm of political communication.

According to the latest Global Risks Report by the World Economic Forum, false and misleading information supercharged by cutting-edge AI represents the top immediate risk to the global economy. The report, based on a survey of nearly 1,500 experts, industry leaders, and policymakers, highlights that rapid advances in technology are creating new problems or exacerbating existing ones.

One of the primary concerns is the potential for AI-powered misinformation and disinformation. The proliferation of generative AI chatbots, such as ChatGPT, makes it easier to create sophisticated synthetic content that can manipulate large groups of people. This capability, once limited to those with specialised skills, is now accessible to a broader audience, increasing the risk of widespread misinformation. As Carolina Klint, a risk management leader at Marsh, stated, "You can leverage AI to do deep fakes and to really impact large groups, which really drives misinformation."

## Government and Legal Provisions to Combat Fake News

The spread of misinformation, disinformation, and fake news is criminalised under various sections of the Indian Penal Code and the Information Technology Act (2000). In 2023, MP Shri Manoj Kotak introduced the Prohibition of Fake News on Social Media Bill, 2023, to establish a regulatory authority aimed at prohibiting fake news on social media. The bill defines fake news as misquotation or false/inaccurate reporting of statements, editing audio or video to distort facts or context, or purely fabricated content. It also includes provisions for funding the establishment of this regulatory authority.

A report by the Massachusetts Institute of Technology's Media Lab revealed that social media is a major hub for fake news. The study examined 120,000 news stories shared by 3 million people on Twitter between 2006 and 2017, finding that fake news was shared 70% more than real news. Additionally, 80% of fake news is spread by just 0.1% of Twitter accounts, and 1% of users are responsible for spreading 100% of fake news. This proliferation of fake news complicates the identification of true information.

Relevant legal sections include Section 153A, which criminalises promoting enmity between different groups, Section 500, which defines the punishment for defamation, and Section 504, which deals with intentional insult with the intent to provoke a breach of peace. Section 505(1) addresses the spread of rumours or reports intended to incite groups of people. Additionally, Section 54 of the Disaster Management Act, 2005, punishes the circulation of fake news or warnings that cause panic, highlighting its relevance for digital media platforms during sensitive times.

## Case Study: Karnataka Government's Initiative to Combat Fake News through AI- Powered Fact-Checking Unit

In August 2023, Karnataka embarked on a groundbreaking initiative to combat the growing threat of fake news by introducing a dedicated fact-checking unit. This bold move positioned Karnataka as the trailblazer among states, taking proactive measures to address the issue with the integration of cutting-edge technologies like artificial intelligence (AI) and machine learning. Led by Priyank Kharge, the state's IT/BT minister, the Congress-ruled government sought to establish a resilient system capable of detecting, restraining, and penalising individuals responsible for generating and spreading malicious content.

The decision to launch the fact-checking unit received approval during a meeting on August 18, 2023, with Chief Minister Siddaramaiah recognizing the urgency of curbing the circulation of fake news, particularly in the lead-up to the 2024 Lok Sabha polls. The government, anticipating the potential surge in misinformation and fake news during critical periods, aimed to adopt a comprehensive and proactive strategy.

A key aspect of the approach was the incorporation of AI and machine learning technologies, setting the Karnataka initiative apart from existing fact-checking mechanisms operated by the state police. Siddaramaiah underscored that fake news significantly contributed to communal polarisation in the state.

The fact-checking team's role involved identifying suspicious content and collaborating with hosting platforms such as X, Facebook, and others to address and remove proven fake information. Significantly, the unit emphasised taking punitive actions not only against proven fake news but also against materials deemed dangerous and capable of disturbing societal peace.

Karnataka's government showcased a forward-thinking approach to addressing the challenges posed by fake news, leveraging advanced technologies and a comprehensive framework for a proactive response. This case study provides insights into the strategies employed

by a state government to combat misinformation while delicately balancing considerations of freedom of speech and public safety.

The significance of the Karnataka Government's initiative to combat fake news through an AI-powered fact-checking unit lies in its pioneering approach to addressing misinformation. By leveraging advanced technologies like artificial intelligence and machine learning, Karnataka sets a precedent for proactive and technologically sophisticated measures to detect, restrain, and penalise the spread of fake news. This initiative highlights the importance of tackling misinformation to prevent societal polarisation and ensure public safety, particularly during critical periods like elections. It serves as a model for other regions to balance freedom of speech with the need to maintain societal harmony through innovative solutions.

### Solutions/Probable future of AI in this field

The persistent challenge of fake news demands strategic solutions and anticipatory measures, especially in the context of AI. A significant contemporary challenge is the quest by various organisations across diverse sectors to find viable solutions for identifying fake news circulating online.

Deep learning[7] (DL) has recently become an emerging technology among the research community and has proven to be more effective in recognizing fake news than traditional ML[8] methods. DL has some particular advantages over ML, such as;

- Automated feature extraction,
- Lightly dependent on data pre-processing
- Ability to extract high-dimensional features, and
- Better accuracy (M. F. Mridha, A. J., Keya, M. A., Hamid, M. M., Monowar & Rahman, M. S., 2021)

Khattar et al. (2019) presented MVAE, a Multimodal Variational Autoencoder tailored for Binary fake news detection, incorporating both textual and image modalities. The text was processed using a Recurrent Neural Network (RNN) featuring Long Short-Term Memory (LSTM), while the image analysis utilised a Convolutional Neural Network (CNN) VGG-19, pre-trained with ImageNet.

Given the global nature of information flow, international collaboration is imperative. Countries and organisations should collaborate to share information, coordinate responses, and establish a unified front against cross-border fake news campaigns. The Smart System and Data Engineering Research Group at Macquarie University have devised an advanced artificial intelligence (AI) model and algorithm aimed at tackling the issue of fake news dissemination. Tailored for incorporation into applications or web software, including platforms like news and social media sites, this inventive model is distinguished by its ability to diminish the proliferation of misleading information. It achieves this by providing users with curated links to authentic news stories that resonate with their individual interests.

According to Dr. Archana Kumari, human intelligence cannot be replaced by AI. After a certain time, AI algorithms get repetitive which are easily detected. Human beings should tame AI to make it more productive not in just detecting fake news but in other fields too. Along with keyword search and AI, Intuition also plays a significant tool while detecting fake news which is mostly text based.

"AI has huge potential to reduce the damage done by fake news, but it will take time. It is not going to eliminate fake news," Pitroda added at a recent AI for Good webinar hosted by the International Telecommunication Union (ITU).

While acknowledging the potential risks and hurdles, the future of journalism holds considerable promise with the integration of AI content tools. The future of AI in combating fake news involves a dynamic interplay between technological innovation, regulatory frameworks, and concerted efforts to empower individuals with the knowledge and tools needed to navigate the evolving information landscape responsibly. Ongoing collaboration among diverse stakeholders will be pivotal in shaping a more secure and trustworthy digital environment.

## Discussion

In conclusion, this research provides a comprehensive examination of the role of Artificial Intelligence (AI) in addressing the issue of fake news within the Indian digital media landscape. Through a mixed-method approach combining primary surveys, expert interviews, and secondary research, the study delves into the advantages, disadvantages, and potential solutions offered by AI in combating misinformation.

### Significance

This research study is significant due to its timely focus on addressing the escalating issue of fake news in India's rapidly evolving digital landscape. By exploring the advantages and disadvantages of AI in combating misinformation and assessing potential solutions, your research contributes to the critical discourse on media literacy and technology's role in safeguarding information integrity. This work holds relevance for policymakers, media practitioners, and the general public seeking effective strategies to navigate the challenges posed by fake news in the Indian digital era.

The findings underscore the limited awareness among respondents, particularly in younger age groups, regarding fact-checking websites and AI tools for detecting fake news. While there is a consensus on the importance of AI regulations in countering fake news, concerns persist regarding its potential impact on news fairness and objectivity.

Expert insights, particularly from Dr. Archana Kumari, highlight the need for a nuanced understanding of fake news and the productive integration of AI in journalism.

The Karnataka Government's initiative to establish an AI-powered fact-checking unit serves as a notable case study, demonstrating proactive measures to combat misinformation at the state level. Moving forward, the research emphasises the importance of international collaboration, technological innovation, and regulatory frameworks in effectively combating fake news. While AI holds immense potential in enhancing journalism and mitigating the spread of misinformation, it is essential to strike a balance between leveraging AI's capabilities and upholding ethical principles, including privacy rights and freedom of speech.

One key solution is the implementation of AI-driven tools that automatically detect and flag suspicious content. These tools can be integrated into social media platforms and news websites to provide real-time analysis and alert users to potential misinformation. Such technological innovations are crucial in creating a proactive defence against the spread of fake news. Additionally, developing and enforcing robust regulatory frameworks is essential. These regulations should mandate transparency and accountability from digital platforms in managing and mitigating fake news. This includes setting standards for the use of AI in monitoring content and ensuring compliance with ethical guidelines to protect privacy and freedom of speech. By combining technological advancements with strong regulatory measures, it is possible to create a comprehensive strategy to effectively combat fake news in the digital era.

In conclusion, this research contributes to a deeper understanding of the complex interplay between AI and fake news in the digital age, offering insights into potential strategies for fostering a more secure and trustworthy information ecosystem. By adopting a multi- dimensional approach, encompassing technological, regulatory, and educational interventions, stakeholders can work together to address the challenges posed by fake news and ensure the integrity of digital media platforms.

## Gaps/Challenges

Following a little futuristic vision, this research seeks the future of AI, in some ways. The fact that AI has not popularly integrated in the fact-checking industry yet poses a challenge for researchers to find a solution to the problem statement. The descriptive and analytic approach of this research helps present a holistic picture of the role of AI in either generating, identifying or spreading fake news. At the same time, the limited availability of websites/tools with AI integration for fact-checking showed itself as the biggest challenge. The following phase of this research aims to diversify the age bracket of the survey. There were no ethical constraints that arose but gathering responses for our sample frame within the target audience required regular follow-ups and reiterations. The revision of questions was crucial to this step and for the interviews as well, which provided great insight for this research.

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