

Article

Optimizing AI Potential in Political Communication: A Study of the 2024 Indonesian Presidential Election

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Abstract: Technological developments with the use of artificial intelligence in political communication, especially during the presidential election. AI in addition could take part in the presidential and vice-presidential elections of Indonesia in 2024. The objective of this research is to dissect artificial intelligence as a potential strategy that may be implemented during the upcoming elections within digital era. The role of artificial intelligence will be studied to assess the influence that is still being widely spread by artificial intelligence. The systematic literature review (SLR) was used as the methodology. The results of this study are of importance for supporting the assumption that it is possible to influence public opinion with AI analysis, increase voter participation and utilize AI for political campaign strategies. Steps involved in systematic literature review process include stating research objectives, developing, and validating review methods, searching literature, selecting articles for inclusion, assessing article quality, forming data findings, data analysis and reporting results. As such measures demonstrate, use of artificial intelligence (AI) in political communication can shape public discourse, serve as a campaign strategy, and offer more tailored interactions between politicians and electorate. Trust and democratic integrity call on promoting transparency, ethics, and data security above everything else. Therefore, for achieving full potential of AI in context of political communication field, political practitioners, researchers as well as policy makers can receive considerable suggestions out of this research study.

Keywords: Artificial Intelligence (AI); campaign strategies; optimization; political communication; presidential election

Introduction

Advancements in information and communication technology have had a significant impact on Indonesian society. Data from the Association of Internet Service Providers in Indonesia in 2023 shows that the penetration of Internet users in Indonesia reached 78.19% (Asosiasi Penyelenggara Jasa Internet Indonesia (APJII), 2023). Technological advancements have led to many societal changes, including in political activities. Communication is an essential element in political, political communication determines the character and quality of democracy in a society. Political communication channels political messages such as demands, protests, and support (aspirations and interests) to the heart (center) of the political system processing and the results of that processing are then channeled back by political communication. Digital communication techniques like social media, digital platforms, and instant messaging applications have created new opportunities and transformed political communication. Technology designed for campaign activities aims to increase voter participation (Ilmy et al., 2021).

The evolution of technology with the emergence of Artificial Intelligence (AI) has become crucial in enhancing the efficiency of human tasks, including in the realm of political communication. Artificial Intelligence brings significant changes that influence how humans work and communicate (Argyle et al., 2023). The utilization of Artificial Intelligence (AI) in the realm of political communication has become a crucial solution in conveying political messages, especially during election periods. Presidential and legislative candidates utilize artificial intelligence (AI) in their campaigns because it simplifies labor-intensive and manual socializing chores. These obligations can now be fulfilled more rapidly and simply which in turn will enhance the overall quality of the campaign. United States as well as United Kingdom are two countries who have employed artificial intelligence (AI) in political marketing.

An instance of AI application is the use of chatbots which employ delivering of tailored messages through the targeting of relevant adverts hence, they may be used to influence public perception on social media (Helberger et al., 2020). However, García-Orosa (2021) observes that current research has not found out the impact of digital technology in public discourse. Another AI application for building online communities within political networks are social bots. They could spread views of certain groups and influence opinions on social media (García-Orosa, 2021). There is a need for further research on the implications of the application of AI in democracy to learn how societies affect democracies (Hagen et al., 2022). Technologies which are currently being developed, may affect the way in which people perceive politics. The occurrence of political debates on their social media during elections can be employed to enrich the quality of public discourse and encourage reciprocal communication on democracy. Nevertheless, it has yet been found out whether using AI to receive advice will result in attitude improvement among voters (Argyle et al., 2023).

Previous researches that have used artificial intelligence in political communication have mainly focused on trend analysis, application of AI in campaign have been phenomena such as voter data analysis, and political marketing. AI implementation in the field of political campaign strategies is yet to be scoped among other aspects, this include its consequences, how it is used, and privacy and public discourse effects caused by it. As a result, AI underpinnings regarding the overall research in political communication are insufficiently covered especially with the use of presidential campaign as an example. Considering this, the study attempts to explore how artificial intelligence will be used in Indonesian political discourse leading up to the 2024 presidential and vice-presidential elections. The purpose of this study is to investigate the usefulness of AI in political campaigns, as well as its effects on privacy and public discourse.

In this research, the researcher incorporates the theory by Andrea Guzman and Seth C. Lewis, namely the communicative Artificial Intelligence (AI) theory, to elaborate the integration of Artificial Intelligence in political communication. Communicative Artificial Intelligence (AI) theory highlights three critical elements of communicative AI technology. The Functional aspect of this theory examines the interaction between AI and humans, human reactions to it, the identification of AI within the communication framework, and how technology design affects human perception and response. The Relational dynamics emphasize the impact of AI technology on social relationships, the role of AI in socially constructed technology, self-awareness in AI interaction, and the social and power implications of human-technology interaction. The Metaphysical aspect includes ontological questions about human and technological communication, ethics and laws related to AI, redefining communication in the context of AI, and the cultural impact of AI technology use, especially in the human-machine communication (HMC) environment (Guzman & Lewis, 2020).

Methodology

The research method uses a systematic literature review (SLR) carried out to strengthen findings, including finding, studying, assessing, and interpreting all existing research with specifically determined research questions (Kitchenham & Charters, 2007). According to Xiao and Watson there is eight processes in *systematic literature review* namely formulating the research problem, developing, and validating review rules, searching the literature, screening articles for inclusion, assessing the quality of the articles, deepening the data findings, then analyzing the data and reporting the findings (Xiao & Watson, 2019). The stages is shown in Figure 1 below.

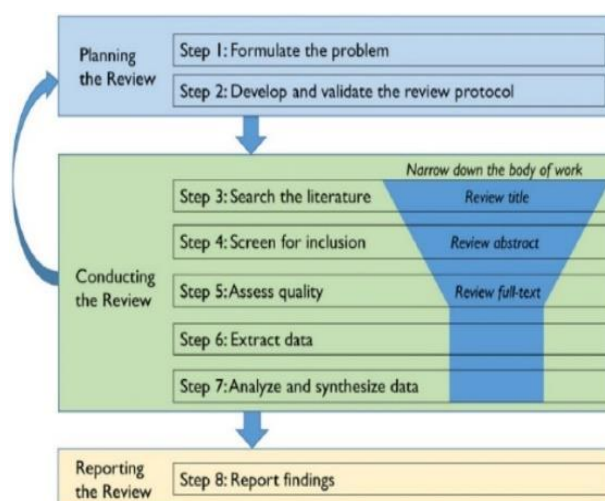


Figure 1. Systematic literature review process
Source: Xiao & Watson (2019)

1. Problem Formulation

Determine the keywords for this research, namely the keywords used in *Artificial Intelligence* and *political communications*. Therefore, researchers made *Research Questions* based on the chosen topic.

RQ1. What role will the use of AI play in elections?

RQ2. How will the use of AI and privacy security impact elections?

2. Develop and validate review protocols

The inclusion and exclusion criteria used are as follows:

- i. The data used is in the time 2020 – 2024 and limits articles to only those in English and the subject area of the articles is only social science
- ii. Data obtained from Scopus.com
- iii. The data used is only related to *Artificial intelligence* and *election*.
- iv. Articles that take AI research into economics, the realm of sex, and illegal drugs are not included.

3. Literature Search

A Literature search from reviewing article titles that match the keywords *Artificial Intelligence* and *election* as an article search. The literature search channel uses sources from Scopus.com to avoid predatory journals. The literature search resulted in the discovery of 35 pieces of literature starting from 2020 - 2024, then narrowing them down by looking at the article titles so that the literature obtained was 29.

4. Screen For Inclusion

In this section, the articles are reviewed in the abstract section, and findings are narrowed down to 22 based on the abstract which is adjusted to the keywords and RQ of this research.

5. Quality Value

The quality assessment of the articles was reviewed through the full body of the article so that the selected articles were 17 articles that were in accordance with the *research questions*. The selected articles are all indexed by Scopus *quartile 1*.

6. Extracting Data

In this step, the article is mapped using the help of VOSviewer to see the relationship between problem keywords and to visualize the problem network and subsequent research novelties.

Monitoring Disinformation, Violence, and Election Protection	AI is utilized to identify the credibility of news sources, enhance media literacy effectiveness, but also raises concerns about user data privacy.
Identification of News Source Credibility	AI is used to identify the credibility of news sources, enhance media literacy effectiveness, but also raises concerns about user data privacy.
Analysis of Voter Data and Prediction of Election Results	AI is used to identify the credibility of news sources, enhance media literacy effectiveness, but also raises concerns about user data privacy.
Identifying and Addressing Disinformation	AI is used to identify and address disinformation more efficiently, influencing users' freedom of expression, but raising concerns about data privacy.

The electoral process is a demonstration of democracy, allowing voters to actively view the candidates. The 2024 Indonesian presidential and vice-presidential elections will be an opportunity for candidates to demonstrate their vision and mission uniquely and creatively. Each partnership has implemented a methodical campaign, with the main strategy focusing on the use of artificial intelligence (AI), such as the use of AI in surveys counting candidate votes.

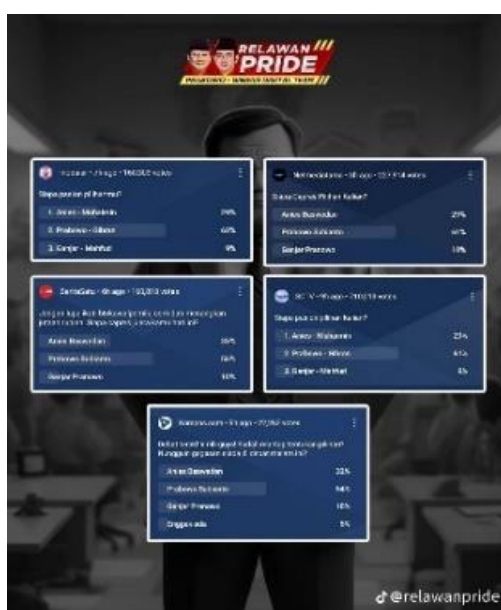


Figure 3. Use of AI in Surveys When Counting Candidate Votes
Source: TikTok @relawanpride (2024)

According to García-Orosa (2021), AI is starting to play a role in political strategies, especially concerning the use of big data. Indonesian politicians can leverage AI to gain numerous advantages in their election campaigns. A significant advancement is the ability of AI to accurately predict consumer purchasing decisions. Furthermore, AI can analyze data to identify patterns and insights, aiding candidates in understanding the needs and expectations of voters. Artificial intelligence is utilized to enhance survey methods and calculate the general public's income to benefit the three candidates. Based on research conducted at Brigham Young University, artificial intelligence (AI) can respond complex questionnaires concerning human behavior. This study was focused on GPT-3 model language correctness evaluation that demonstrates interrelation between ideas, attitudes, and socio-cultural foundation within human subpopulations (Argyle et al., 2023). In the experiment, artificial personas were created by researchers who had a set of specific

characteristics like race, age, ideology and religiosity. They tested whether they (AI) would vote the same as humans in the US presidential election. Using a human comparative database, research conducted by Argylea (2023) found a correspondence between how AI and human’s vote. AI has the potential to replace human respondents in survey-style research.



Figure 4. Custom Messaging Campaign Using AI Images
Source: Official Account prabowo.gibran2 (2024)

AI has penetrated to an extent that it can create AI generated visual candidates to be used in campaign strategies; among other campaign tools. The new approach helps those who frame policies to do much more and do it a lot more effectively than before by tapping into their knowledge and experience of the workforce for carrying out an analysis on demographics as well as communication objectives. Such messages are transmitted through various media vlogs, interviews, and short video material thus providing the candidates with sufficient methods of pushing their campaign narratives forward. AI may also be employed during elections among other things in analyzing campaign candidate’s poster image like the degree of candidate smiles which can affect election outcomes. This is done when it comes to analyzing campaign candidate posters especially those of female candidates (Koo, 2022).

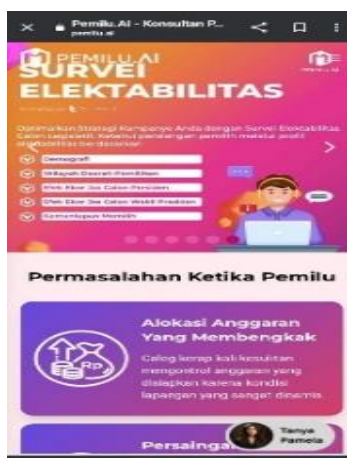


Figure 5. PEMILU.AI Campaign Platform
Source: pemilu.ai (2024)

The PEMILU.AI platform is designed to analyse big data, including political data, socio-economic data, demographic data, candidate profiles, as well as social media and online media data from electoral

districts. Consequently, this platform can provide microtargeting recommendations for targeted campaign strategies tailored to target voters, regions, target groups and candidate personas. PEMILU.AI offers a variety of AI-based tools and features that generate campaign strategies based on candidate personas, precisely targeted microtargeting campaigns, and campaign communications strategies for constituents. Regarding campaign strategy recommendations, PEMILU.AI can help prospective legislative members identify target areas, vote targets, strategy recommendations, activities and target groups per electoral district based on critical issues in the electoral district, as well as recommendations for online news in the electoral district. Meanwhile, in terms of campaign communications, PEMILU.AI can design campaign communications starting from slogans, speech narratives, social media captions, targeted advertising targets, and APK designs, as well as providing campaign team monitoring applications designed to help legislative candidates increase their chances of winning. election during their campaign. The findings of the present study are consistent with earlier research showing the use of artificial intelligence (AI) in digital political marketing Alfiani et al. (2023) emphasize that AI is used to analyze trends in people's voting behaviour and build emotional connections between political entities and the public (Alfiani et al., 2023).

2. The Impact of AI Integration in Political Communications on Political Campaigns

The rapid development of Artificial Intelligence (AI), particularly in the digital era, is consistent with the annual increase in internet users. The role of AI is not only limited to providing information about candidates but can also have an impact on political change by removing certain barriers

Table 2. Summary of the Impact of Using AI from 17 Literature Reviews

Impact of Using AI	Positive impact	Negative impact
The use of AI chatbots to disseminate personalized political content can collect users' personal data without their knowledge.	Enhancing the personalization of political content for voters.	Concerns regarding the privacy and security of individual data.
The potential use of AI to predict voter behavior and generate persuasive messages may involve the collection of personal data without consent.	Improving the effectiveness of political communication strategies.	Improving the effectiveness of political communication strategies.
Spreading fake news perpetuates social division.		Protecting voter data privacy is important to prevent manipulation in the electoral process.
The use of AI in elections can have a positive impact on improving the efficiency and accuracy of vote prediction.	Enhancing the accuracy of election result predictions.	The security of voter data privacy is a top priority.
The use of AI in politics can influence the quality of democracy.	Improving government transparency and accountability.	Regulation is needed to protect personal data from AI misuse.
The use of AI in monitoring online content can identify threats of violence and disinformation.	Strengthening efforts in monitoring and addressing harmful content.	Strict policies and regulations on data privacy protection are necessary.
The use of AI in media literacy can enhance the effectiveness of learning.	Promoting critical thinking and better understanding of information.	Concerns regarding user data privacy need to be addressed.

Discussion

The integration of Artificial Intelligence in political communication can be seen from 3 aspects:

1. Functional Aspect

The utilization of central issues by AI has proven to be a functional aspect of campaigns. The Functional Aspect of communicative AI theory depicts the interaction between AI and humans, human reactions, AI identification within the communication framework, and how technological design influences human perceptions and responses (Guzman & Lewis, 2020). Politicians leverage AI technology to detect central issues that influence voters. Trends significantly impact voters as social media users quickly grasp and follow emerging trends. Analysis of news, social media and public opinion in real time enable campaign to read the shift in the populaces' preferences and re-focus the campaign in line with shifting social and political dynamic. AI can assess huge and complex datasets helping government as well as political institutions make more fact-driven decisions. With advanced Algorithms and machine learning models, AI can trace patterns, trends, and connections between data which are hard to identify manually (Helberger et al., 2020). This is useful to presidential candidates as it helps them know the areas where they can improve their campaign strategies for better outcomes.

The utilization of media in any form as a communication channel from candidates to voters can be considered effective and efficient during the campaign period (Tomin et al., 2020). The use of political information on social media has a positive impact on political effectiveness (Tan, 2024). The innovation of Artificial Intelligence (AI) has brought about a new paradigm in the way humans interact with technology. This Artificial Intelligence brings about significant changes to influence how humans work and communicate (Argyle et al., 2023). In previous research, it was found that the AI was of a great importance in political campaigns especially through the quick and correct capturing of the public sentiment (Hajdúková, 2024). AI is used to manage large amounts of data and identify trends related to purchasing decisions, such as public opinion and consumer preferences for political parties. This may help you understand the recruitment process and the political methods used to improve recruitment results. Aside from that, the use of AI in everyday life can have an impact on the outcome and process of purchasing, particularly when it comes to identifying and resolving the ever-increasing complexity of environmental issue (Ray, 2021).

2. Relational Aspect

One of the AI chatbot platforms used in Indonesia is Chat2024.com. The platform features a collection of chatbots trained on large amounts of data from various sources, such as candidate videos and writings. Users, in this case voters, are allowed to interact with chatbots, both individually and collectively, or even compete in debates. This use of AI chatbots shows the concept of AI as a relational aspect that can help build emotional connections between candidates and voters and improve the voter experience during the campaign process. The use of AI, such as prediction of incoming votes and chatbots in elections, is employed as a strategic tool to match the interests and expectations of modern voters, particularly the millennial and educated group, which constitute a substantial part of the voter demography (Wadipalapa et al., 2024).

Artificial intelligence (AI) is differentiated based on its ability to duplicate cation of human intelligence, allowing computer systems to complete tasks autonomously, a characteristic that plays an important role in the field of technology (Lee, 2020). The ideas outline in the communication theory of AI's functional and relational aspects are embodied in the practical use of AI in the Indonesian political arena, as demonstrated using the PEMILU.AI. This innovative platform functions as a personalized political advisor, carefully designed to help prospective legislative candidates gain deep insight into the desires and hopes of voters in their chosen districts. With a suite of cutting-edge features and capabilities, PEMILU.AI is poised to revolutionize election tactics by leveraging advanced and forward-thinking methodologies in interacting with voters. Therefore, seamless integration of AI into the strategic structure of political campaigns shows many beneficial results, ultimately increasing effectiveness and influencing the final outcome of the electoral process.

3. Metaphysical Aspect

The use of AI in digital political communication presents various challenges, especially regarding privacy issues (Al-Khassawneh, 2023). According to Guzman and Lewis who outlined communicative theory, there

is a need to establish clear boundaries between humans and AI, especially regarding ethical considerations and legal frameworks that regulate the use of AI (Guzman & Lewis, 2020). Therefore, it is critical to prioritize transparency, ethical standards, and strong data security measures to maintain public trust and preserve the integrity of democracy. Additionally, another obstacle to integrating Artificial Intelligence into digital policy stems from the need for a comprehensive understanding of the function of this technology and the limitations campaign teams face in accessing it effectively. Al-Khassawneh also argues for an in-depth awareness of ethical considerations among AI users as a preventative strategy to reduce any breaches of public trust and protect individual privacy.

The use of AI is very useful and makes it easier for advertising in Malaysia. However, there are still doubts among users regarding the security of their data because they are afraid of misuse (Agil et al., 2024). The cyber threat crisis in Malaysia was handled by establishing the National Cyber Security Agency (NACSA) under the auspices of the National Security Council (NSC). The results of the analysis conducted by Sabrina and her colleagues found that the NSC's involvement was proactive in dealing with cyber security (Rahim et al., 2024). Other related research has outlined the potential impact of artificial intelligence in political communication discussing social media manipulation, online disinformation and astroturf campaigns that target to change public opinion. This research highlights the bots which is a form of artificial intelligence. Further research addresses how digital technology can influence social debate in addition to external risks to integrity in elections. Apart from that, there is a need to overcome difficulties in dealing with technological advances in political communication, technology is an important aspect that must be considered (García-Orosa, 2021).

Furthermore, it is critical to recognize the indispensable role of humans in the application of AI in digital policy, as human intelligence is still required for interpreting machine learning results and developing solutions in collaboration with industry experts or regulatory bodies. In Indonesia, the ethics of using artificial intelligence are regulated in the Circular Letter of the Minister of Communication and Information Number 9 of 2023 concerning the Ethics of Artificial Intelligence, which was signed on December 19, 2023 and covers three policies: ethical values, implementation of ethical values, and responsibility. responsible for the use and development of artificial intelligence (Menteri Komunikasi dan Informasi Republik Indonesia, 2023). Meanwhile in Malaysia, the National Cyber Security Agency (NACSA) has been formed under the auspices of the National Security Council (NSC) to handle the cyber threat crisis. From the results of the analysis carried out by Sabrina and her colleagues, it was found that the NSC's involvement was proactive in dealing with cyber security (Rahim et al., 2024). In the future, data security and privacy protection will become fundamental in the use of AI.

Conclusion

Based on the findings and discussions, artificial intelligence (AI), also known as Based on the findings and discussions, it has been proven that artificial intelligence (AI), also known as functional, relational, and metaphysical AI, is a valuable technology for facilitating communication in political election campaigns via social media and AI assistants. In the functional notion, AI is used to improve campaign plans by analyzing voter data, recognizing behavioural patterns, and better understanding voter preferences, resulting in more effective campaign methods. AI also helps to provide more tailored and targeted campaign messages via platforms such as chatbots and social media. In the context of AI as a relational technology, AI becomes an effective campaign tool, assisting in the development of emotional connections between candidates or political parties and the public via data analysis and customized communication strategies, as well as enabling two-way interaction between candidates and voters, thereby increasing public participation in politics.

The implementation of AI changes the way traditional political campaigns are conducted by introducing new and innovative strategies in political communication and helps campaigns understand and respond to the needs and expectations of voters. However, the use of AI in political communication also presents challenges related to privacy and ethics, distinguishing humans from machines, thus requiring a balanced approach between reaping the benefits of technology and maintaining integrity and trust in the democratic process. Further studies may analyze the ethics of AI in political communication.

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