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Political Automation

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ABSTRACT

Political automation refers to the use of technology, particularly artificial intelligence (AI), machine learning (ML), data analytics, and automated systems, in order to automate political processes such as voting, campaigning management, governance, decision-making, and public engagement. It encompasses a wide range of technologies, from social media bots and automated voter outreach to blockchain-based voting systems. Governments were once staffed exclusively with human bureaucrats, but now routinely make use of AI-based software to garner information about citizens to make decisions that will impact their lives. As at today, in many nations this has grossly affected and reduced the level of privacy people can enjoy, how far they can travel, what public benefits they may receive, as well as what they can say and cannot say publicly. The paper looks into the pros and cons, the challenges, and solutions to the issue of political automation in the global context.

KEYWORDS: *Political automation, automation, political machines, artificial intelligence (AI), machine learning (ML), e-voting, blockchain, big data, virtual politician, robotics, algorithmic governance, Automated Systems of Governing (ASG), privacy, governance, democracy, cybersecurity*

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INTRODUCTION

Politics and technology encompass concepts, mechanisms, personalities, efforts, and social movements that includes, but are not necessarily limited to, the Internet and other information and communication technologies (ITCs), as shown in Figure 1. Internet technologies are known to influence political communication and participation, especially in terms of what is known as the "public sphere." The rise in political participation is caused by the use of mobile devices and now portrayed as a voting agent in the least developing countries, leading to access to the public sphere, enhancing individuals' and groups' ability to bring attention to and organize around specialized issues [1-3].

Automation describes a wide range of technologies that reduce human intervention in processes, mainly by predetermining decision criteria, subprocess relationships, and related actions, as well as embodying those predeterminations in machines. This has been achieved by various means which include mechanical, hydraulic, pneumatic, electrical, electronic devices, and computers, usually in combination [1, 4] as shown in Figure 2.

Many years ago, governments were exclusively staffed with human bureaucrats, but as at present governments now make the routine use of AI-based software to gather information about citizens to make decisions that will impact their lives. In many nations, AI determines the level of privacy a person can enjoy, how far they can travel, what public benefits they may receive, and what they can say and cannot say publicly, i. e. no privacy. Eduardo Albrecht posits that in order to interact with this novel form of algorithmic governance, then a new institution would be needed. He then proposed the idea of a Third House, a virtual chamber that will legislate exclusively on AI in government decision-making and should be based on principles of direct democracy. Digital citizens, AI powered replicas of ourselves, which will act as our personal representatives (or emissaries) to this Third House a virtual chamber that will legislate exclusively on AI

in government decision-making and is based on principles of direct democracy, unlike existing upper and lower houses that are representative. The deployment of political automation without such an institution (i. e the Third House) will result in the gradual sunsetting of participatory systems of government, leading to the era in which citizens having abdicated governance in favor of AI without clear mechanisms for oversight, will find that they no longer need to trust their conscience on matters of public policy [5].

HISTORY OF POLITICAL MACHINES

A political machine is a party organization that recruits its members by the use of tangible incentives such as money, political jobs, and that is characterized by a high degree of leadership control over member activity. Political machines started as grassroots organizations to gain the patronage required to win the modern election. Having strong patronage, these "clubs" were the main driving force in gaining and getting out the "right party vote" in the election districts [1, 6]. The *Encyclopedia Britannica* defines "political machine" as "a party organization, headed by a single boss or small autocratic group, that commands enough votes to maintain political and administrative control of a city, county, or state" [7, 11]. While William Safire, in his *Safire's Political Dictionary*, defined "machine politics" as "the election of officials and the passage of legislation through the power of an organization created for political action," the term which he generally considered as pejorative, often implying corruption [8].

The hallmarks of political machines are hierarchy and discipline. According to Safire, "it generally means strict organization." Quoting Edward Flynn, a Bronx County Democratic leader who ran the borough from 1922 until his death in 1953 [9], Safire wrote "the so-called independent voter is foolish to assume that a political machine is run solely on good will, or patronage, for it is not only a machine: it is an army. And in any organization as in any army, there must be discipline" [8, 11].

In the United States, the term "political machine" dates back to the 19th century, where such organizations have existed in some municipalities and states since the 18th century [10, 11]. The late 19th century saw large cities in United States such as Boston. Chicago, Cleveland, Kansas City, New York City, Philadelphia, St. Louis, and Memphis, being accused of using political machines [11, 12]. During this time "cities experienced rapid growth under inefficient government" [12], with each city's machine under a hierarchical system with a "boss" who held the allegiance of local business leaders, elected officials and their appointees, and who knew the proverbial buttons to push to get things done. Benefits and problems both resulted from the rule of political machines [13, 14].

This system of political control – known as "bossism" – emerged particularly in the Gilded Age. In this case, a single powerful figure (the boss) was at the center and was bound together to a complex organization of lesser figures (the political machine) by reciprocity in promoting financial and social self-interest. One of the most infamous of these political machines was Tammany Hall, the Democratic Party machine that played a major role in controlling New York City and New York politics and helping immigrants, mostly notably the Irish, rise up in American politics from the 1790s to the 1960s. From 1872, Tammany Hall had an Irish "boss." However, Tammany Hall also served as an engine for graft and political corruption, and perhaps most notoriously under William M. "Boss" Tweed in the mid-19th century [15].

Lord Bryce described these political bosses as: "An army led by a council seldom conquers: It must have a commander-in-chief, who settles disputes, decides in emergencies, inspires fear or attachment. The head of the Ring is such a commander. He dispenses places, rewards the loyal, punishes the mutinous, concocts schemes, negotiates treaties. He generally avoids publicity, preferring the substance to the pomp of power, and is all the more dangerous because he sits, like a spider, hidden in the midst of his web. - he is a boss" [16].

James Pendergast, when asked if he was a boss, simply replied: "I've been called a boss. All there is to it is having friends, doing things for people, and then later on they'll do things for you…. You can't coerce people into doing things for you, you can't make them vote for you. I never coerced anybody in my life. Wherever you see a man bulldozing anybody he don't last long" [12].

Furthermore, Theodore Roosevelt, before he became president in 1901, was deeply involved in New York City politics. He explained how the machine worked by saying that: "The organization of a party in our city is really much like that of an army. There is one great central boss, assisted by some trusted and able lieutenants; these communicate with the different district bosses, whom they alternately bully and assist. The district boss in turn has a number of half-subordinates, half-allies, under him; these latter choose the captains of the election districts, etc., and come into contact with the common heelers" (a heeler is a henchman of a political boss; or a worker for a

local party organization, especially, ward heeler) [11, 17].

Voting strategy: In the late 19th century, the many machines that were formed served the immigrants to the U. S. who viewed machines as vehicles for political enfranchisement to win elections. During this period, the machines' staunchest opponents were members of the middle class, who were shocked at the malfeasance and did not need the financial help [18]. The corruption of urban politics in the United States was denounced by private citizens, who worked to achieve national and state civil-service reform so as to replace local patronage systems with civil service. During Theodore Roosevelt's time, the Progessive Era mobilized millions of private citizens to vote against machines [19], as shown in Figures 3, 4 and 5.

The 1930s to 1970s: In the 1930s, James A. Farley was the chief dispenser of the Democratic Party's patronage system through the Post Office and the Works Progress Administration (WPA) which eventually nationalized many of the job benefits machines provided. The New Deal allowed machines to recruit for the WPA and Civilian Conservative Corps, making Farley's machine the most powerful. All patronage was screened through Farley, including presidential appointments. The New Deal machine fell apart after he left the administration over the third term issue in 1940. The machines lost much of their patronage after the agencies were abolished in 1943. The formerly poor immigrants who had benefited under Farley's national machine had become assimilated and prosperous, and no longer needed the informal or extralegal aides provided by machines, while with the exception of Chicago, most of the big city machines were known to have collapsed in the 1940s [11, 20].

A local political machine in Tennessee in the 1930s and 1940s were forcibly removed in what was known as the 1946 Battle of Athens [11]. Smaller communities such as Pama, Ohio, in the post-Cold War era under Prosecutor Bill Mason's "Good Old Boys" also featured what could be called political machines, but lacked the power and influence of the larger boss networks. An example was the "Cracker Party" which was a Democratic Party political machine that dominated city politics in Augusta, Georgia, for over half of the 20th century [21-23]. Political machines also throve in Native American reservations, where tribal sovereignty was used as a shield against federal and state laws against the practice [11, 24].

TYPES OF POLITICAL AUTOMATION

The following types of political automation are common.

1. *Voting automation*: This is the use of technology to automate voting processes, making them more efficient and secure [25]. The use of wireless voting keypads and receiver, and dedicated software that can accurately and reliably collect and aggregate votes, pass/reject motions and provide detailed reports from attendance to voting and election results, making the voting process become more efficient, transparent and auditable [26], as shown in Figure 6.
2. *Campaign automation:* This is the use of technology to automate campaign management, including tasks such as email marketing, social media management, donor tracking, fundraising, data management and analysis, as well as your event and content strategy to significantly enhance the efficiency of your campaign – ensuring a more dynamic, modern and agile campaign overall [27, 28].
3. *Governance automation:* This is the use of technology to automate governance processes, including tasks such as policy analysis, budgeting, and decision-making [29]. For the past decade or two, the European Union (EU) and European countries have been working hard to reap the benefits of what is sometimes called the new digital economy. The European Commission (EC) operates a strategy called "Shaping Europe's digital future" under which it gathers policies for "the digital society," "advanced digital technologies," international cooperation" and the aforementioned "digital economy" [30]. Governments round the world do strive now to tap into the avalanche of data generated by the contemporary interactions between humans and various information technologies – the so-called "bid data" identified as new oil of our time [31], and also as a powerful imaginary that enables new forms of control and governing [32]. Throughout the EU and beyond, a vast array of governmental technologies based on algorithms, AI and ML have been put in motion and made to operate on the massive data traces left behind by humans and machines, referred to collectively as Automated Systems of Governing (ASG), which are political instruments in the sense that they cannot be made to act from neutral positions [33, 34].
4. *Computational propaganda:* It is the use of automation and algorithms to spread misleading information over social media networks [35].

5. *Social bots:* They are automated social media accounts often built to look and act like real people, in order to manipulate public opinion [35], as shown in Figures 7 and 8.
6. *Political bots:* These are automated social media accounts that are used to amplify the spread of particularly partisan, or completely false information [35].
7. *Virtual politicians:* Virtual politicians are indeed a type of automation, specifically a form of AI, which is designed to engage with citizens, understand their views, and represent their interests in a political context. A virtual politician or an AI politician refers to a non-human entity seeking or in government office. A virtual politician would have similar power to a human serving in the same position, but would be programmed to make choices based on an artificially intelligent algorithm. AI are now being put to work on tasks that require human traits [36], such as empathy, but has been used to replace human imperfections. A virtual politician named SAM (Semantic Analysis Machine) has been used in New Zealand and some other countries, but still in its experimental phase [37].

Robotics focuses on the manipulation of the physical area, while AI is orientated towards the internal or digital part. Both robotics and AI aim to automate tasks and facilitate processes for humans, and use data collected by input and output sensors to facilitate decision-making [38]. These types of political automation could have significant impacts on politics and democracy, hence the need to fully understand their uses and implications.

BENEFITS

Some of the benefits of political automation include:

1. Enhanced efficiency in governance: Automation reduces bureaucratic delays by enabling faster decision-making and streamlining administrative processes. AI-powered chatbots and automated systems help in responding to citizen queries, processing applications, and managing public services efficiently [39, 40].
2. Improved policy-making through data-driven insights: AI and big data analytics help governments analyze vast amounts of information, allowing policymakers to make informed decisions based on real-time data. Predictive modeling can help forecast social issues, economic trends, and potential political unrest [41].
3. Enhanced political engagement and transparency: Automation can increase citizen participation in governance through digital voting systems, AI-driven consultations, and blockchain-based transparency tools. This helps to reduce corruption and promotes public trust in government institutions [42].
4. Cost reduction and resource allocation: The automation of repetitive administrative tasks reduces costs related to paperwork, staffing, and manual processing. This enables governments to allocate resources more effectively to critical areas such as healthcare, infrastructure, and security [43].
5. Reduction of human bias in decision-making: Properly designed AI systems can minimize human biases in governance by making decisions based on objective data rather than political influences. This is useful in judicial automation and policy enforcement [44].
6. Strengthening national security and crisis management: Automation enhances security through AI-driven surveillance, cybersecurity measures, and automatic emergency response systems. Governments can make use of predictive analytics to prevent threats such as cyberattacks or pandemics [45].
7. Reduction in corruption: Blockchain and automated oversight mechanisms can improve transparency in governance, reducing human bias, and corruption. Smart contracts in public procurement can ensure fair distribution of government resources [46].
8. Cost saving or cost reduction in governance: Automation reduces the need for large bureaucracies and cutting operational costs. AI-driven budget analysis can optimize government spending, ensuring better allocation of scarce resources [47].
9. Real-time crisis management: AI-powered simulations and real-time data analytics can help government respond swiftly to crises, such as pandemics, natural disasters, or economic downturns [48].

CHALLENGES FACING POLITICAL AUTOMATION

Political automation faces several challenges among which are:

1. Ethical and bias concerns: From the data they are trained on AI systems can inherit or perpetuate biases and discrimination (if the algorithms used to automate processes are biased or discriminatory), which can lead to unfair political outcomes. Furthermore, automated decision-

making could reinforce existing inequalities, particularly in voter targeting and campaign strategies [44].

2. Misinformation and manipulation: AI-driven and automated bots campaigns can spread misinformation, thereby influencing public opinion. Deepfakes and AI-generated content make it even harder to distinguish truth from falsehood [49].
3. Cybersecurity threats: Automated political systems are prone or vulnerable to hacking, data breaches, and cyberattacks. Foreign interference in elections using AI-driven tactics poses a national security risk [50].
4. Lack of transparency and accountability: AI-driven political decisions can be opaque, making it difficult to hold actors accountable. More so, there is little regulation governing the ethical use of automation in politics [51].
5. Public distrust and democratic legitimacy: People may distrust automated political processes, due to the fear of the loss of human agency. This is coupled with the fact that over-reliance on automation in governance can reduce democratic participation [52].
6. Job displacement: it can lead to job displacements, particularly in areas where tasks are repetitive or can be easily automated [53].

THE FUTURE OF POLITICAL AUTOMATION

Future political automation will witness [54, 55]:

- Increased use of AI: There would be increase in the use of artificial intelligence with other technological tools in political automation, in order to enable more complex tasks to be automated.
- Greater transparency: There would be need for greater focus on transparency in political automation, to make it more transparent and accountable.
- More regulation: To address the issues bordering on biases, security and job displacements.

CONCLUSION

Political automation is a rapidly evolving field that has the potential to transform the way people participate in politics, interact with governments and make decisions. With the various automation technologies available now and in the future, offering many benefits like increased efficiency, accuracy, and transparency, but also come along with some challenges or concerns about biases, cybersecurity, reliability and accountability. When all these challenges are eliminated, it will enhance greater citizens' engagement and participation in politics to ensure democracy and good governance. More information about political automation can be obtained in [56-59].

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Figure 1. Political movement

Source:https://www.google.com/search?q=images+on+political+automation+by+wikipedia&sca_esv=326bfc1759a095a4&udm=2&biw=1036&bih=539&sxsrf=AHTn8zqidj9Bix8dInxfMTQ_kqMrrIoZ9Q%3A1743186940506&ei=_OvmZXRHv7BhbIPqJP32Ak&oq=images+on+political+automation+by+w&gs_lp=EgNpbWciI2ltYWdlcyBvbiBwb2xpdGljYWwgYXV0b21hdGlvbiBieSB3KgIIADIHECMYJxjJAkjdrQFQwpY0YgBcAN4AJABAJgByQKgAYgNqgEHMC4yLjMuMrgBAcgBAPgBAZgCB6AC7AmYAwCIBgGSBwcyLjAuNC4xoAe4DbIHBTItNC4xuAfYCQ&sclient=img#vhid=HesbfeFHEFH2gM&vssid=mosaic

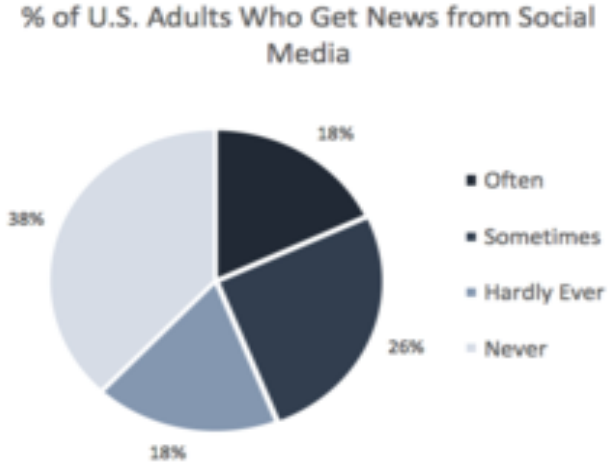

Figure 2. Social media use in politics

Source:https://www.google.com/search?sca_esv=218665eea446f0ac&sxsrf=AHTn8zrGuSXJBZykX3teIHIrhyc65uMTKQ:1743107577525&q=images+on+political+automation+by+wikipedia&udm=2&fbs=ABzOT_CWdhQLP1FcmU5B0fn3xuWpAdk4wpBWOGsoR7DG5zJBpcx8kZB4NRoUjdgt8WwoMvlShZUHgaGO_QEjdLI1_v2RImbt6yuaihSiBTX0oWDEqMwfVr6_DPkAb076czEChEBXO1nXHkLl2doE59WhMOILr7UQGkFgdTkLuuLWPcS7q_Dywt7RT32Up0ycFybfMmZL7U0FiU2DVtwqE2HcKa9MBmQQ&sa=X&ved=2ahUKEwicwtrfjauMAxXgRkEAHeIGE_8QtKgLegQIExAB&biw=1036&bih=539&dpr=1#vhid=2haYGkhVmlaRDM&vssid=mosaic

Figure 3. 2015 Phippine general election

Source:https://www.google.com/search?sca_esv=218665eea446f0ac&sxsrf=AHTn8zrGuSXJBZykX3teIHIrhyc65uMTKQ:1743107577525&q=images+on+political+automation+by+wikipedia&udm=2&fbs=ABzOT_CWdhQLP1FcmU5B0fn3xuWpAdk4wpBWOGsoR7DG5zJBpcx8kZB4NRoUjdgt8WwoMvlShZUHgaGO_QEjdLI1_v2RImbt6yuaihSiBTX0oWDEqMwfVr6_DPkAb076czEChEBXO1nXHkLl2doE59WhMOILr7UQGkFgdTkLuuLWPcS7q_Dywt7RT32Up0ycFybfMmZL7U0FiU2DVtwqE2HcKa9MBmQQ&sa=X&ved=2ahUKEwicwtrfjauMAxXgRkEAHeIGE_8QtKgLegQIExAB&biw=1036&bih=539&dpr=1#vhid=MxFR6OZsDrKLJM&vssid=mosaic

Figure 4. Social Democrats, USA

Source:https://www.google.com/search?q=images+on+political+automation+by+wikipedia&sca_esv=326bfc1759a095a4&udm=2&biw=1036&bih=539&sxsrf=AHTn8zqidj9Bix8dInxfMTQ_kqMrrIoZ9Q%3A1743186940506&ei=_OvmZXRHv7BhbIPqJP32Ak&oq=images+on+political+automation+by+w&gs_lp=EgNpbWciI2ltYWdlcyBvbiBwb2xpdGljYWwgYXV0b21hdGlvbiBieSB3KgIIADIHECMYJxjJAkjdrQFQwpY0YgBcAN4AJABAJgByQKgAYgNqgEHMC4yLjMuMrgBAcgBAPgBAZgCB6AC7AmYAwCIBgGSBwcyLjAuNC4xoAe4DbIHBTItNC4xuAfYCQ&sclient=img#vhid=M2xNBjKPhlnLvM&vssid=mosaic

Figure 5. Socialism

Source:https://www.google.com/search?q=images+on+political+automation+by+wikipedia&sca_esv=326bfc1759a095a4&udm=2&biw=1036&bih=539&sxsrf=AHTn8zqidj9Bix8dInxfMTQ_kqMrrIoZ9Q%3A1743186940506&ei=_OvmZXRHv7BhbIPqJP32Ak&oq=images+on+political+automation+by+w&gs_lp=EgNpbWciI2ltYWdlcyBvbiBwb2xpdGljYWwgYXV0b21hdGlvbiBieSB3KgIIADIHECMYJxjJAkjdrQFQwpY0YgBcAN4AJABAJgByQKgAYgNqgEHMC4yLjMuMrgBAcgBAPgBAZgCB6AC7AmYAwCIBgGSBwcyLjAuNC4xoAe4DbIHBTItNC4xuAfYCQ&sclient=img#vhid=ZNz2UooXrGy19M&vssid=mosaic

Figure 6. Automation

Source:https://www.google.com/search?sca_esv=218665eea446f0ac&sxsrf=AHTn8zrGuSXJBZykX3teIHIrhyc65uMTKQ:1743107577525&q=images+on+political+automation+by+wikipedia&udm=2&fbs=ABzOT_CWdhQLP1FcmU5B0fn3xuWpAdk4wpBWOGsoR7DG5zJBpcx8kZB4NRoUjdgt8WwoMvlShZUHgaGO_QEjdLI1_v2RImbt6yuaihSiBTX0oWDEqMwfVr6_DPkAb076czEChEBXO1nXHkLl2doE59WhMOILr7UQGkFgdTkLuuLWPcS7q_Dywt7RT32Up0ycFybfMmZL7U0FiU2DVtwqE2HcKa9MBmQQ&sa=X&ved=2ahUKEwicwtrfjauMAxXgRkEAHeIGE_8QtKgLegQIExAB&biw=1036&bih=539&dpr=1#vhid=rWugJGOrYJ0PeM&vssid=mosaic

Figure 7. Chatbot

Source:https://www.google.com/search?sca_esv=218665eea446f0ac&sxsrf=AHTn8zrGuSXJBZykX3teIHIrhyc65uMTKQ:1743107577525&q=images+on+political+automation+by+wikipedia&udm=2&fbs=ABzOT_CWdhQLP1FcmU5B0fn3xuWpAdk4wpBWOGsoR7DG5zJBpcx8kZB4NRoUjdgt8WwoMvlShZUHgaGO_QEjdLI1_v2RImbt6yuaihSiBTX0oWDEqMwfVr6_DPkAb076czEChEBXO1nXHkLl2doE59WhMOILr7UQGkFgdTkLuuLWPcS7q_Dywt7RT32Up0ycFybfMmZL7U0FiU2DVtwqE2HcKa9MBmQQ&sa=X&ved=2ahUKEwicwtrfjauMAxXgRkEAHeIGE_8QtKgLegQIExAB&biw=1036&bih=539&dpr=1#vhid=X479CWbUnwNaUM&vssid=mosaic

Figure 8. Twitter Bot

Source:https://www.google.com/search?q=images+on+political+automation+by+wikipedia&sca_esv=326bfc1759a095a4&udm=2&biw=1036&bih=539&sxsrf=AHTn8zqidj9Bix8dInxfMTQ_kqMrrIoZ9Q%3A1743186940506&ei=_OvmZXRHv7BhbIPqJP32Ak&oq=images+on+political+automation+by+w&gs_lp=EgNpbWciI2ltYWdlcyBvbiBwb2xpdGljYWwgYXV0b21hdGlvbiBieSB3KgIIADIHECMYJxjJAkjdrQFQwpY0YgBcAN4AJABAJgByQKgAYgNqgEHMC4yLjMuMrgBAcgBAPgBAZgCB6AC7AmYAwCIBgGSBwcyLjAuNC4xoAe4DbIHBTItNC4xuAfYCQ&sclient=img#vhid=mG6BNVD31OacSM&vssid=mosaic