Bringing Government Into the 21st Century:
Artificial Intelligence and State Government Operations

By Dr. Edward Longe
Director, Center for Technology & Innovation, The James Madison Institute

On November 30, 2022, OpenAI released ChatGPT, a program that revolutionized how humans interact with technology and the world around them. Unlike most technological tools that came before it, ChatGPT could respond to almost any question and independently generate text. Since ChatGPT was released, companies like Microsoft, X (formerly Twitter), Google, and IBM have also released similar tools and integrated them into current product offerings.

What is AI?

Although there is no universally agreed-upon definition as to what artificial intelligence is,[1] in simple terms, it refers to a machine's ability "to perform the cognitive functions we associate with human minds, such as perceiving, reasoning, learning, interacting with an environment, problem-solving, and even exercising creativity."[2] While AI is considered a recent invention or emerging technology, it

has been a part of society for some time, with tools like predictive text, voice assistants, and chatbots all used almost daily.

While AI appears in many different forms, the two most common are generative AI and machine learning. Each form has its distinct functions and use cases.

The most well-known form of AI is generative artificial intelligence, known for its ability to generate content like text, audio, video, or images from human prompts. Generative AI relies on Large Language Models (LLMs) to collect vast amounts of text online from online sources that can then be trained to respond to specific prompts from a human operator.[3] Given its ability to generate content and training on internet sources, generative AI could easily be used to draft responses, summarize texts, and quickly conduct research.

Unlike generative AI, Machine Learning (ML) takes vast amounts of data on a range of topics and uses them to make predictions.[4] These predictions range from providing consumers with streaming recommendations and image recognition to predicting an individual's likelihood of suffering from a disease or illness. ML is further categorized as supervised or unsupervised. Supervised ML requires labeled data sets to train algorithms to grow more accurate over time. For example, an algorithm trained with labeled images of cars can eventually learn to identify types of vehicles without human guidance.[5] Unsupervised learning is used to find patterns and trends, which can then be used to predict future behavior.[6]

While consumers and private companies have embraced AI, state governments also stand to benefit from using and implementing the technology. In this paper, The James Madison Institute (JMI) outlines potential state government uses of artificial intelligence (AI) and how it can modernize state government operations and deliver better services. These potential uses will not be exhaustive but should outline how services can be improved when state governments, heads of agencies, and lawmakers em-

brace emerging technology. Importantly, this paper also outlines some of the challenges agencies face in deploying AI in their daily operations.

At its foundation, AI promises to reshape how government agencies function— providing rapid summaries of legislation, lowering costs, and increasing the speed at which government services are delivered to residents.[7] Though governments have historically lagged behind the private sector in technology adoption,[8] the public sector today can utilize these new systems and deliver better services to residents. As researchers from the *Alan Turing Institute* noted, "AI systems within public services seem to have the potential to increase public sector capacity," with the principal benefit being enhancements to productivity and freeing "up the time of skilled public sector workers."[9]

Governments across the globe have already begun to integrate AI systems into their daily operations. In the United States, President Biden issued *Executive Order (EO) 13960* that required federal agencies to create an inventory of how agencies currently use AI and how they could use it in the future.[10] Since that order entered the federal register, agencies have provided a list of over 700 current and potential use cases to optimize and streamline government services. For example, the Department of Homeland Security uses facial recognition to help screen individuals seeking entry into the United States and those passing through security checkpoints at airports to speed up processing, screen baggage, and confirm the identities of individuals.[11] Additionally, the Department of Veterans Affairs, an agency beset by poor service and internal problems, has created a chatbot to allow veterans to ask basic questions about benefits and services offered.[12]

The Australian government has introduced AI to streamline services. For example, the Australian Tax Office (ATO), the agency tasked with administering the country's tax code, rolled out a chatbot. The ATO found that automated AI responses established a first contact resolution rate of 80%, exceeding the industry benchmark of 60-65%, and they could automate the simplest tasks, allowing government employees to spend more time resolving complex issues.[13] The ATO estimated that its chatbot, known as Alex, held over 1.4 million conversations with citizens between July 2020 and March 2021.[14]

Despite the immense benefits of AI to streamline government work, the Biden administration has sought to establish a hostile regulatory regime that could crush innovation and prevent the full benefits of the technology from being realized. In late 2023, Biden issued the *Safe, Secure, and Trustworthy AI* executive order that directed federal agencies "to look into implications of algorithmic systems and processes for a wide variety of issues including copyright, competitiveness, cybersecurity, education, health, housing, infrastructure, labor, and privacy."[15] As Adam Thierer notes, Biden's order contains expanded oversight, mandated dis-

closures, and red tape represents "a potential sea change in the nation's approach to digital technology markets, as federal policymakers appear ready to shun the open innovation model that made American firms global leaders in almost every computing and digital technology sector."[16] Will Henshall has also suggested that Biden's sweeping executive order could brush "up against the limits of executive power," inviting lawsuits from developers who fear executive overreach.[17]

While the White House has been aggressive in how it proposes to regulate AI, Congress has been relatively quiet. Despite hundreds of AI bills being filed over the past year, none have made it to President Biden's desk. Congress's inability to regulate is primarily due to slim majorities in both chambers and deep partisan divides on how technology should be regulated.

With the prospect of federal legislation governing AI use slim, state governments have taken steps toward governing how public and private entities use the technology. In 2024 alone, over 600 pieces of AI legislation were introduced at the state level, highlighting the levels of legislative interest in regulating the technology.[18] Unfortunately, this state-level approach presents significant problems for both companies and consumers, not to mention for the governments themselves. For state governments, a nationwide patchwork of rules and regulations will mean no state can provide the same service as another, meaning there will likely be no uniform experience across the country. As such, Florida might be able to better incorporate AI into delivering constituent services compared to Hawaii, which has enshrined a precautionary approach into law.

More broadly, the patchwork of rules nationwide makes it difficult for consumers to understand their rights when interacting with the technology. For businesses seeking to develop and deploy AI tools, this patchwork will inevitably increase the cost of doing business in multiple states, a cost consumers will pay in the form of higher prices or reduced innovation.

Roadblocks to Implementation

One of the principal concerns facing state governments and state employees is how the incorporation of AI will affect their jobs. According to the *International Monetary Fund*, around 60 percent of jobs in developed countries could be exposed to AI.[19] While it is too early to determine the full effects of AI on the job market, early indications suggest that technology is changing jobs rather than replacing them. The transformative nature of AI occurs because the technology "performs small tasks rather than entire jobs or entire business processes."[20] This theory is evidenced in empirical research. In 2015, *McKinsey* estimated that around 45 percent of U.S. jobs could be automated, however, that estimate was later downgraded to less than five percent.[21] It's also possible that AI could create new positions within state governments, such

as data trainers, ethicists, integration specialists, or security engineers,[22] meaning AI is a net creator of jobs.

While it's unlikely that AI will take the jobs of state employees, the next question becomes how agencies recapture time saved and how the incorporation of AI changes job descriptions.

Significant concerns also exist around privacy and data security. Machine learning technology requires vast amounts of data to accurately predict potential fraud, identity verification, or accuracy of submitted information. Some of this data could be sensitive, containing cell phone numbers, home addresses, financial information, or social security numbers. As such, there is always a risk that state agencies could become targets of nefarious actors.[23] These concerns are not unfounded, with *Blackberry* reporting that between March 1 and May 31, 2023, they stopped "more than 55,000 individual attacks against the government and public services sector, up nearly 40% from the previous reporting period."[24] While these attacks did not target ML tools utilized by state governments, they highlight the reality that public entities will always be targets of cybercriminals.

One way to combat this is for state governments to increase investments in cyber resilience and ensure that data stored on residents is secure. Additionally, the growing power of AI strengthens the case for state legislatures and the federal government to pass comprehensive data privacy legislation that dictates how agencies should protect data.

Procurement also presents a significant roadblock to AI deployment for state agencies. While AI developments are occurring at breakneck speed, it takes time for state agencies to receive the necessary approvals, complete public bidding, and work through the procurement process. Unfortunately, this means that by the time a state agency is ready to purchase an AI tool, it will likely be outdated, forcing them to either purchase outdated tools or restart the process. One way to avoid this would be for state governments to streamline the procurement process to enable agencies to obtain and deploy AI technology faster than they can.

State agencies have also expressed significant concern about potential bias within AI systems and how that might affect the delivery of resident services. While often not intentional, innate bias in those creating and training AI systems can be reflected in decisions and predictions.[25] While bias is likely an issue for state governments, it should not be a reason to eschew the technology or create an overly burdensome regulatory regime. Knowing that the problem exists means that steps can be taken to correct it, such as ensuring accurate entries or that training data is representative of the state population. Such steps, which don't require legislative intervention, can help produce unbiased recommendations or predictions.

One of the principal ways state governments have sought to regulate AI is through transparency requirements and disclosures.

While they are problematic for private actors, they are especially troubling for public entities. Not only could they give nefarious cyber actors seeking to disrupt state governments an additional, but they could also increase the workload on employees, degrading their ability to deliver core services to residents. These reporting requirements could degrade the benefits of AI for state agencies, making it harder for them to improve service delivery.

Unemployment and Reemployment Benefits

Despite having one of the lowest unemployment rates in the United States and one of the healthiest job markets, there were approximately 353,000 Floridians who were unemployed in March 2024.[26] For those out of work, the State of Florida offers $275 per week in unemployment insurance for 12 weeks. Like most states administering unemployment benefits, applicants must submit several documents and pieces of evidence to prove eligibility. In 2024, adjudicators in Florida took between two to six weeks to make a final determination. However, applications with incomplete evidence or missing documents can delay adjudication, causing bottlenecks that delay cases and increase employee workload.

While the adjudication process will always require human review, Machine Learning AI programs could be used to accelerate the process. For example, the technology could automatically screen applicants to ensure the required documentation has been submitted. State agencies could also use the technology to flag potentially fraudulent applications, such as individuals submitting multiple claims, to ensure that only applicants in genuine need receive reemployment benefits. Importantly, using Machine Learning technology in this way could free up adjudicators to focus on complex cases or more thoroughly investigate suspicious applications.

Using AI to screen applications for benefit fraud has proven successful. During the COVID-19 pandemic, Colorado's Department of Labor and Employment was able to use machine learning technology to prevent over 50,000 fraudulent unemployment claims from being approved."[27]

Another way to free up the staff time would be to create a chatbot that could answer questions like what documentation is required, request case status updates, or how much benefit applicants are eligible for. Florida Commerce has recognized the time-saving potential of a chatbot and finalized its decision to implement one to answer simple questions about reemployment benefits.[28]

General Administrative Work

One of the principal complaints leveled against government agencies is that they are overly bureaucratic and slow to provide resident services. One reason for this perception is that government employees are engaged in time-consuming administrative work that could be automated.[29] *Deloitte* has estimated that 108 million employee hours are lost by state government employees each year on tasks that could be automated. Additionally, *Deloitte* has reported that state employees spend about 20 percent of their time on tasks they consider peripheral to their core job functions.[30]

General administrative tasks such as data entry, drafting correspondence to residents, summarizing legislation and other tasks considered peripheral to core job duties could be automated by artificial intelligence, freeing up many hours for state employees to focus on more complex or important tasks.

By harnessing AI's capability to automate routine, redundant, or error-prone tasks, government workers can reallocate their focus towards more complex, critical-thinking-oriented responsibilities and reduce waste. This shift enhances operational efficiency and improves the quality of services offered to the public. As governments continue to integrate AI into their workflows, the anticipated outcome is a more agile bureaucracy capable of meeting the evolving needs of its citizens with unprecedented precision and speed.

While some state government functions could benefit from automation, there will inevitably be some functions that require to be completed by humans. According to Carl Frey and Michael Osborne at the University of Oxford, jobs requiring social perceptiveness, negotiation, persuasion, and caring for others are less likely to be automated in the future compared to administrative positions and non-public-facing roles.[31] Roles that require what Frey and Osborne call social intelligence tasks are less likely to be automated because "while algorithms can now reproduce some aspects of human social interaction, the real-time recognition of natural human emotion remains a challenging problem, and the ability to respond intelligently to such inputs is even more difficult. Even simplified versions of typical social tasks prove difficult for computers."[32]

Reuniting People and Property and Resolving Warranty Disputes

In Florida, the state's Chief Financial Officer is tasked with resolving disputes between individuals and companies that offer warranties on products and services. Once a consumer opens a dispute, the case is assigned to a specialist adjudicator who must determine whether the consumer complaint is valid and determine a solution. Today, most of the back-end work is undertaken manually, with cases being assigned to specialists. While adjudicating cases will always require human review, incorporating AI could benefit this process. For example, AI embedded into phone systems could be used to populate claim forms, allowing cases to be opened faster. The technology could also cross-check warranty claims and insurance policies before recommending a resolution for human review.

The Chief Financial Officer's office is also tasked with holding unclaimed assets, typically money, and returning them to their rightful owner once a verified claim has been made. At any time, an estimated 60,000 claims are pending with the CFO's office, and cases take around 80 days to adjudicate. AI technology could be used in several ways to help clear this backlog and help the state government reunify property with rightful owners. Firstly, AI technology could be used by adjudicators to verify the identity of claimants or identify fraudulent cases. Using AI in this capacity and freeing state employees to focus on the more complex cases would help ease the backlog and speed up the rate at which cases can be resolved.

Policy solutions

Procurement reform

Artificial intelligence is developing at a rapid pace. Unfortunately, it can often take months for government agencies to obtain the necessary approvals to procure the latest technology. State legislatures can aid the deployment of AI technology for state agencies in streamlining the procurement process. This might include giving department heads greater control over their budgets, cutting unnecessary steps, or shortening public bidding invitations.

Taskforces

Government agencies will have countless potential uses for AI, many of which were not discussed in this report. State legislatures should establish government modernization taskforces to study how AI and other emergent technologies could be incorporated into daily operations to improve government services. Ideally, these taskforces will also consider how to mitigate some of the potential harms associated with AI usage.

Cybersecurity reform

State governments are already prime targets for cyber criminals, and the growing use of AI will only make them more vulnerable. State legislatures must invest in cyber resilience and cyber training programs to ensure that when criminal networks target state agencies, they can protect sensitive data and ensure it remains secure.

Permissionless Innovation

State governments must allow state agencies the freedom to experiment with AI and use the technology in day-to-day operations. Such experimentation can only occur if legislatures avoid prescriptive rules dictating how the technology can be used or imposing burdensome reporting requirements.

Retraining and Reskilling

While AI will not likely make employees redundant, it will change jobs and create new job opportunities for workers. State agencies, secretaries, and department heads must examine how they can retrain workers who will see their jobs change and prepare workers for new jobs that AI and other emergent technologies will create.

Do We Face Tradeoffs?

To fully embrace the potential of AI, state governments will inevitably need to enact policy changes that risk growing the size and scope of government, something the center-right and right have historically opposed. For example, would using AI technology to detect fraud require agencies to collect more information on citizens than is necessary? What are the privacy implications of this? How would a state agency resolve a false positive on fraud detection? Moreover, how would the agency deal with employees who struggle to use the technology when reskilling and retraining? These questions may not have a satisfying answer today but will become critical in the coming years and will be faced by agency heads, secretaries, and, ultimately, lawmakers.

Turner Loesel is a research assistant at The James Madison Institute and contributed to this study.

Endnotes

1 Jerry Kaplan, *Generative Artificial Intelligence: What Everyone Needs to Know*, (Oxford UK: Oxford University Press, 2024) p.14

2 McKinsey & Company, "What is AI?," April 24, 2023. Available Online: https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-ai#/

3 Kaplan, p.31.

4 Sara Brown, "Machine Learning Explained," *Massachusetts Institute of Technology*, April 21, 2021. Available Online: https://mitsloan.mit.edu/ideas-made-to-matter/machine-learning-explained

5 Ibid.

6 Ibid.

7   Patrick Mikalef, Siw Olsen Fjørtoft, Hans Yngvar Torvatn, "Artificial Intelligence in the Public Sector: A Study of Challenges and Opportunities for Norwegian Municipalities." " In *Digital Transformation for a Sustainable Society in the 21st Century: 18th IFIP WG 6.11 Conference on e-Business, e-Services, and e-Society, I3E 2019, Trondheim, Norway, September 18–20, 2019, Proceedings 18*, pp. 267-277. Springer International Publishing, 2019.

8 Sara Hinkley, "Technology In The Public Sector And The Future Of Government Work," *UC Berkley Labor Center*, January 10, 2023. Available Online: https://laborcenter.berkeley.edu/technology-in-the-public-sector-and-the-future-of-government-work/#:~:text=With%20the%20exception%20of%20the,IT%20capacity%2C%20and%20agency%20fragmentation.

9 Jonathan Bright, Florence E. Enock, Saba Esnaashari John Francis, Youmna Hashem, and Deborah Morgan, "Generative AI is already widespread in the Public Sector," *Alan Turing Institute* (2024).p.2. Available Online: https://arxiv.org/pdf/2401.01291.pdf

10 "Executive Order 13960 of December 8, 2020, Promoting the Use of Trustworthy Artificial Intelligence in the Federal Government," 85 FR 78939 (2020), Available Online: https://www.federalregister.gov/documents/2020/12/08/2020-27065/promoting-the-use-of-trustworthy-artificial-intelligence-in-the-federal-government

11 Press Release, "Using AI to Secure the Homeland," *Department of Homeland Security*, December 13, 2023.

12 Press Release, "VA adopts new artificial intelligence strategy to ensure trustworthy use of technology for Veteran care." *Department of Veterans Affairs,* October 14, 2021. Available Online: https://news.va.gov/press-room/va-adopts-new-artificial-intelligence-strategy-to-ensure-trustworthy-use-of-technology-for-veteran-care/

13   Australian Tax Office, "OECD Tax Administration Series Report 2021 – ATO submission," March 2021. Available Online: https://www.oecd.org/tax/forum-on-tax-administration/publications-and-products/australia-virtual-assistant-alex.pdf

14 Ibid.

15 Adam Therier, "White House Executive Order Threatens to Put AI in a Regulatory Cage," *R-Street Institute*, October 30, 2023. Available Online: https://www.rstreet.org/commentary/white-house-executive-order-threatens-to-put-ai-in-regulatory-cage/

16 Ibid.

17 Will Henshall, "Why Biden's AI Executive Order Only Goes So Far," *Time,* November 1, 2023. Available Online: https://time.com/6330652/biden-ai-order/.

18 Multistate, "2024: Artificial Intelligence (AI) Legislation." Available Online: https://www.multistate.ai/artificial-intelligence-ai-legislation

19 Mauro Cazzaniga; Florence Jaumotte; Longji Li; Giovanni Melina; Augustus J Panton; Carlo Pizzinelli; Emma J Rockall; Marina Mendes Tavares, "Gen-AI: Artificial Intelligence and the Future of Work," *International Monetary Fund*, January 14, 2024. Available Online: https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2024/01/14/Gen-AI-Artificial-Intelligence-and-the-Future-of-Work-542379?cid=bl-com-SDNEA2024001

20 Thomas H. Davenport and Steven M. Miller, "Working with AI: Real Stories of Human-Machine Collaboration" (Cambridge MA: The MIT Press, 2022.), p.xiii.

21 Ibid; Michael Chui, James Manyika, and Mehdi Miremadi, "Four Fundamentals of Workplace Automation," *McKinsey Quarterly*, November 2015. Available Online: https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/four-fundamentals-of-workplace-automation#/; Michael Chui, James Manyika, and Mehdi Miremadi, et. al. "Harnessing Automation for a Future That Works," *McKinsey*, January 2017. Available Online: https://www.mckinsey.com/featured-insights/digital-disruption/harnessing-automation-for-a-future-that-works

22 Agrawal, A., Gans, J. S., & Goldfarb, A. (2019). Artificial intelligence: the Ambiguous Labor Market impact of automating predic-tion. *Journal of Economic Perspectives*, 33(2), 31-50; *Forbes Technology Council*, " 20 New And Enhanced Roles AI Could Create," *Forbes*, July 6, 2023. Available Online: https://www.forbes.com/sites/forbestechcouncil/2023/07/06/20-new-and-enhanced-roles-ai-could-create/?sh=1d60b87a6f04

23 Adam Zewe, "A New Way To Look At Data Privacy: Researchers Create A Privacy Technique That Protects Sensitive Data While Maintaining A Machine-Learning Model's Performance." *MIT News*, July 14, 2023. Available Online: https://www.techexplorist.com/new-way-look-data-privacy/64478/

24 *Blackberry*, "Global Threat Intelligence Report: Actionable and Contextualized Intelligence to Increase Your Cyber Resilience," August 2023. Available Online: https://www.blackberry.com/us/en/pdfviewer?file=/content/dam/bbcomv4/blackberry-com/en/solu-tions/threat-intelligence/2023/threat-intelligence-report-august/Blackberry-Global-Threat-Intelligence-Report-August-2023.pdf

25 Aylin Caliskan, Joanna J. Bryson ,And Arvind Narayanan, "Semantics Derived Automatically From Language Corpora Contain Human-Like Biases," *Science*, 356, (Issue 6334), 183-186.

26 *Florida Commerce,* "Florida's March Figures Released," April 19, 2024. Available Online: https://lmsresources.labormarketinfo.com/library/press/release.pdf

27 *Government Business Council*, "Safeguarding Unemployment Insurance Benefits from Fraud," June 14, 2022. Available Online: https://www.nextgov.com/sponsors/2022/06/safeguarding-unemployment-insurance-benefits-fraud/368142/

28 *Florida Commerce*, "Reemployment Assistance Modernization." Available Online: https://www.floridajobs.org/office-directory/divi-sion-of-workforce-services/initiatives/reemployment-assistance-modernization

29 Peter Viechnicki and William D. Eggers, "How Much Time and Money Can AI Save Government," *Deliote University Press,* p.6. Available Online: https://www2.deloitte.com/content/dam/insights/us/articles/3834_How-much-time-and-money-can-AI-save-government/DUP_How-much-time-and-money-can-AI-save-government.pdf

30 Ibid.

31 Carl Frey And Michael Osborne, "The Future Of Employment: How Susceptible Are Jobs To Computerisation?" *University of Oxford Martin School Working Paper*, September 2013. Available Online: https://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf

32 Ibid.

The James Madison Institute
The Columns
100 North Duval Street
Tallahassee, FL 32301

850.386.3131

www.jamesmadison.org