Executive Summary

The rapidly advancing field of artificial intelligence (AI), while having the potential to beneficially help society, increases the imminent risk of the malignant use of powerful technology. States in the United States must place guardrails on AI technology and ensure that citizens properly understand different aspects of AI technology. Promoting a common understanding of AI equalizes the playing field and ensures that everyone can get their hands on the latest technology. As AI becomes more pervasive, it will impact different areas of society including the economy and education system. This report dives into recent legislation and toolkits released by the Government of Ohio and examines the driving factor behind these new advancements.

I. Introduction

In November of 2022, when ChatGPT, a large language model (LLM), was publicly unveiled by OpenAI, legislators, educators, and everyone alike were unsure of the impacts that it would bring. Most educational institutions across the United States enacted a ban on the usage of generative AI technology for schoolwork. While most K-12 institutions are yet to use AI to teach children, proponents of AI technology have reasoned that AI offers a myriad of benefits for our education system, which is experiencing numerous challenges such as teacher shortages. Recently, Ohio has released an AI toolkit for K-12 schools, joining only 12 other states around the U.S. that are currently developing guidelines for the use of AI in education (*AI Is Already Disrupting Education, but Only 13 States Are Offering Guidance for Schools – Center on Reinventing Public Education*, 2023).

In addition, as more AI technology is developed, the data that AI models are trained on must be clear of bias. If and when companies, educational institutions, and the government start to adopt AI technology, algorithmic bias must be taken into account. AI is trained on inherently biased data, and as a result, can easily perpetuate stereotypes in the community. Researchers from Stanford University reported that Black taxpayers were 3 to 5 times more likely to be audited than non-Blacks due to algorithmic bias (*Chatbots, Tax Evasion, and Big Data — How AI Is Transforming the IRS*, 2023). If the usage of AI across all domains continues to grow and data practices stay the same, minorities and other disadvantaged groups will suffer from the impact of algorithmic bias. Bias even stems from the most used generative AI technology, ChatGPT. For example, when asked to generate short stories, ChatGPT was found to be blatantly racist (Piers, 2024). Recognizing the importance of eliminating bias, Ohio has taken steps to thoroughly vet data that are being used to train AI models.

AI content is already starting to flood social media and the internet. As a result, regulation mandating the strict labeling of AI technology continues to become a bigger concern in the minds of regulators. With 2024 being the election year for at least 64 countries, including democracies including the United States, India, and the United Kingdom, 2024 marks the first time that AI will have a massive impact on election cycles.

II. Ohio's Legislative Landscape

- IT-17 - Use of Artificial Intelligence in State of Ohio Solutions
    - This policy aims to safeguard the privacy of Ohioans and their data by mandating that private data and sensitive information stay out of the development of AI tools.
    - This policy also requires the disclosure of generative AI technology. As more AI content floods the digital world, AI technology must be labeled in the interest of transparency and preventing misinformation. Ohio, itself, has elections in 2024, and this legislation will curtail the malicious use of AI.
    - As per the bill, the State of Ohio Chief Data Officer (CDO) Council will be responsible for maintaining statewide data governance standards (Dataset selection and evaluation). The prospect of appointing an overseeing data officer ensures that developers of AI in Ohio will be held accountable for breaching state-wide law.
    - A multiagency AI council will also be established to govern state usage of generative AI solutions. Government AI solutions, such as those being applied by the IRS in the tax auditing process, are increasing digital discrimination (KOVACEV, 2023). As the usage of AI continues to grow and is brought into state services,
- Senate Bill 217 (*AG Yost Teams With Lawmakers to Protect Children From AI-Enabled Abuse*, 2024)
    - Senate Bill 217 focuses on stopping the spread of AI-generated child pornography, a blatant misuse of technology. This bill aims to prevent future instances of AI misuse by mandating that AI content must contain a watermark.
    - Violators of this protocol will face a third-degree felony for misusing AI's generative capabilities to create obscene material depicting minors. In addition, platforms that don't take down AI-generated child pornography within 24 hours of notice will face a $1,000 fine.
- AI Toolkit
    - The AI Toolkit by InnovateOhio is a 7-part course providing guidance on AI technology development and usage to policymakers, teachers, and parents.
    - As educators in Ohio and across the country contemplate using AI in the classroom, this guide plays a pivotal role in teaching educators about how AI can be incorporated to complement the current system.

III. Our Legislative Recommendations

- **Implement a thorough process to vet bias in data**
    - AI models, and more specifically large language models (LLMs), are trained on huge sets of data, including forms of text like books, articles, and websites. Much of this data contains bias from our society. Stereotypes perpetuated by the data spill over into the way that AI models make decisions.
    - To combat bias, there must be a detailed process to complete a thorough job of eliminating bias from AI models. Examples that fulfill this objective include guidelines from the European Union High Level Expert Group on Artificial Intelligence which act as a checklist for AI/ML developers (McKenna, n.d.). The group outlines three characteristics of trustworthy AI: lawfulness, ethicality, and robustness.
- **Impact Assessments**
    - Impact assessments are commonly used to analyze the economic and social impacts of a prospective policy.
    - Bringing impact assessments to AI can offer valuable insights: analyzing the risk posed by AI systems, deciding whether AI models should be deployed, and when and how to hold AI accountable for mistakes (Golbin, 2021).
    - Impact assessments can include simulating user experiences to understand the circumstances under which miscalculated decisions are being taken by AI models.
    - The State of Ohio should use impact assessments for AI models prior to public usage. Impact assessments will be vital for finding faults with AI models. Faults with AI models can have a spiraling impact, but with impact assessment systems in place, they can easily be solved prior to deployment.

IV. Relevant Stakeholders:

- Passing Regulatory Frameworks
    - Mike Dewine (Governor of Ohio) and Jon Husted (Lieutenant Governor of Ohio and Director of InnovateOhio): both were major players in the recent AI toolkit that assists schools in developing policies for the usage of AI technology in the classroom.
    - Attorney General Yost
- AI in Education
    - Andrew O. Brenner (State Senator and Chair of the Ohio House of Representatives Education Committee)
    - Ayana Howard (Dean of The Ohio State University College of Engineering and a top expert in artificial intelligence)
- AI Research
    - Ness B. Shroff (Institute Director of the NSF AI Institute on Future Edge Networks and Distributed Intelligence)
    - Vipin Chaudhary (Kevin J. Kranzusch Professor and chair of the Department of Computer and Data Sciences at the Case School of Engineering.): Case Western Reserve University (CWRU) received a $5.1 million grant, as part of a nationwide effort by the National Science Foundation (NSF) to bring AI and machine learning to more academic institutions.
    - Samer Albahra (Co-leads the Cleveland Clinic Center for Artificial Intelligence and Data Science (CAIDS))
    - Howard Chen (Diagnostics Institute Vice Chair of Artificial Intelligence at Cleveland Clinic)

V. Conclusion:

By implementing AI regulation that attacks the vulnerabilities of AI technology, Ohio has the opportunity to become a leader in promoting responsible development of AI technology. In addition, Ohio's efforts to give AI education to K-12 education systems is a leap forward that promotes a communal understanding of AI. Furthermore, with the 2024 election cycle having already begun with state-wide primary elections, this marks the first time that analysts predict AI will have an impact on the election and voters casting their ballots. With policies such as Senate Bill 217, Ohio has taken a charge forward in mitigating mis- and disinformation propagated by AI content. In the future, Ohio, along with the 49 other states, should protect the public from the dangers of AI and simultaneously leverage the benefits it offers.

Works Cited

AG Yost Teams With Lawmakers to Protect Children From AI-Enabled Abuse. (2024, January 25). Ohio Attorney General. Retrieved May 12, 2024, from https://www.ohioattorneygeneral.gov/Media/News-Releases/January-2024/AG-Yost-Teams-With-Lawmakers-to-Protect-Children-F

AI is already disrupting education, but only 13 states are offering guidance for schools – Center on Reinventing Public Education. (2023, October 30). Center on Reinventing Public Education. Retrieved May 12, 2024, from https://crpe.org/ai-disrupt-ed-13-states/

AI Toolkit. (n.d.). InnovateOhio. Retrieved May 12, 2024, from https://innovateohio.gov/aitoolkit/ai-toolkit

Chatbots, Tax Evasion, and Big Data — How AI is Transforming the IRS. (2023, October 27). Tonneson + Co. Retrieved May 12, 2024, from https://tonneson.com/news-insights/irs-updates/how-ai-is-transforming-the-irs/

Golbin, I. (2021, October 28). *Mitigate AI risks with the use of an algorithmic impact assessment*. PwC. Retrieved May 12, 2024, from https://www.pwc.com/us/en/tech-effect/ai-analytics/algorithmic-impact-assessments.html

McKenna, M. (n.d.). *Bias in AI: How to Mitigate Bias in AI Systems*. Toptal. Retrieved May 12, 2024, from https://www.toptal.com/artificial-intelligence/mitigating-ai-bias

Piers, C. (2024, February 7). Even ChatGPT Says ChatGPT Is Racially Biased. *Scientific American*. https://www.scientificamerican.com/article/even-chatgpt-says-chatgpt-is-racially-biased/

Rise of the tax machines: IRS algorithms are coming for you. (2023, February 19). *The Hill*. https://thehill.com/opinion/finance/3864905-rise-of-the-tax-machines-irs-algorithms-are-coming-for-you/

Use of Artificial Intelligence in State of Ohio Solutions. (2023, December 4). Ohio Department of Administrative Services. Retrieved May 12, 2024, from https://das.ohio.gov/wps/wcm/connect/gov/de987825-6f6d-41e7-86b9-31c957551975/IT-17.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_79GCH8013HMOA06A2E16IV2082-de987825-6f6d-41e7-86b9-31c957551975-oU-tvnx