TO: INTERESTED PARTIES

SUBJECT: HEARTLAND STATES AI SENTIMENT SURVEY - DETAILED ANALYSIS

DATE: AUGUST 28, 2024

HEARTLAND FORWARD
AN INSTITUTE FOR ECONOMIC RENEWAL

On behalf of Heartland Forward, Aaru conducted a simulated poll to gather sentiment on topics relating to artificial intelligence and internet access. This memo provides an analysis of our recent survey across nine Heartland states: Alabama, Illinois, Indiana, Louisiana, Michigan, North Dakota, Ohio, Oklahoma and Tennessee.

KEY FINDINGS

While this poll revealed much about the heartland's sentiment toward artificial intelligence, it uncovered three primary themes that are supported by multiple findings across the survey results. These three findings are:

1. **Respondents generally feel negatively about AI and what it means for the future.** This is exemplified by the following statistics:
   - More than 75% of respondents feel negatively about AI
   - More than 83% of respondents feel AI will negatively impact job opportunities and career paths
   - More than 72% of respondents think AI's impact on society with be negative
2. **People want AI to be regulated.** Over 92% of those surveyed believing that government regulation of AI is moderately or extremely important
3. **Respondents start to feel positively about AI when its potential is applied to specific industries.** For example, across the heartland
   - **Health Care:** 78.5% of respondents believe that AI has at least a moderate potential to make a positive difference in health care.
   - **Agriculture:** 77.0% of respondents believe that AI has at least a moderate potential to make a positive difference in agriculture.
   - **Manufacturing:** 76.7% of respondents believe that AI has at least a moderate potential to make a positive difference in manufacturing.
   - **Education:** 77.4% of respondents believe that AI has at least a moderate potential to make a positive difference in education.
   - **Transportation:** 79.7% of respondents believe that AI has at least a moderate potential to make a positive difference in transportation.
   - **Finance:** 72.5% of respondents believe AI has at least a moderate potential to make a positive difference in finance.
   - **Entertainment:** 69.7% of respondents believe AI has at least a moderate potential to make a positive difference in entertainment.

What these key findings suggest is that we, the general public, don't have a great idea of what AI actually is, how it's used, where it's used or even if it's part of our lives right now and we just don't know it. This lack of transparency is part of what is likely making us feel negatively about AI and its impact, or perceived impact, on our lives. This is also likely why people are eager to see it regulated – the idea that through regulation we will gain clarity not only into the technology itself but the application of it, as well. When we start to get specific, though, and pull back the curtain and apply the technology to specific sectors in a way we can understand and that feels straightforward, we believe there is room for AI to make a positive difference in our lives.

METHODOLOGY

Aaru utilized AI-powered simulations to achieve hyper-accurate results free from human bias. The survey included a minimum of 500 respondents per state based on data accurate as of June 27, 2024. Respondents were representative of their state's demographics. Aaru's methodology involved recreating digital environments with recent news and social media, then populating them with AI-generated respondents reflecting real human profiles. Additional details on the methodology used as well as demographic distributions can be found in the Appendix.

AI'S POTENTIAL IN EDUCATION

And within education, the sector stands out as one of the most varied across different geographies. For example, in Illinois, 91.1% respondents believe AI has at least moderate potential to positively impact education where only 67.1% of respondents in Louisiana believe the same. A breakdown of respondents who believe AI has at least moderate potential to positively impact education can be found below:

- Illinois: 91.1%
- Indiana: 82.8%
- Ohio: 79.5%
- Tennessee: 79.1%
- Michigan: 78.9%
- Alabama: 75.9%
- North Dakota: 73.9%
- Oklahoma: 68.6%
- Louisiana: 67.1%.

When provided specific use cases for artificial intelligence, respondents believe AI can be seen as a positive force across a number of different segments. A focus on this in messaging could largely benefit sentiments around AI as well as public interest in and adoption of the technology.

PERCEIVED IMPACT OF AI

As discussed above, the perceived impact of AI on society is largely negative across the heartland states surveyed. This is demonstrated through the following data points from across the geographies surveyed:

- 83.1-91.4% believe AI will negatively impact job opportunities and career paths.
- 72.2-89.4% think AI's impact on society will be somewhat or very negative in the next decade.
- Louisiana shows the highest level of concern, with 91.4% believing AI will negatively impact job opportunities.

These figures indicate a deep-seated fear of AI-driven job displacement and societal disruption. This perception could lead to resistance against AI implementation in various sectors, potentially slowing economic modernization in these states.

AI IN THE WORKPLACE

Respondents express high levels of anxiety about AI in work settings but show mixed interest in AI training. Across the geographies surveyed:

- 82.4-90.3% are somewhat or very anxious about AI in their field of work.
- 52.6-65.5% agree or strongly agree they should receive AI training in the workplace.
- Alabama shows the highest level of workplace anxiety, with 90.3% feeling somewhat or very anxious.

The disparity between anxiety levels and interest in training suggests a complex relationship with AI in the workplace. While most recognize the need to adapt, there's a significant portion that may be resistant to change. Understanding what drives that resistance is key, given that AI adoption in the workplace will likely impact nearly every sector in the decades to come. This highlights the need for comprehensive change management strategies in AI implementation.

ETHICAL CONCERNS

Significant doubts exist regarding AI's ethical capabilities and data protection:

- 87.4-95.1% are not confident AI can make unbiased ethical decisions.
- 89.1-97.6% lack confidence in AI's ability to safeguard privacy and data.
- Louisiana shows the highest level of concern, with 95.1% not confident in AI's ethical decision-making capabilities.

There exists a critical trust deficit in artificial intelligence systems; a strong majority of the public are not confident in the capability of artificial intelligence to make unbiased decisions. Addressing these ethical and privacy concerns should be a top priority for both AI developers and policymakers in order to gain public trust and acceptance of the technology.

This also plays into the impact of policy on the perception of AI; deeper regulations ensuring AI remains unbiased could alleviate these fears.

GOVERNMENT REGULATION

- 92.9-99.1% believe regulation is moderately to extremely important.
- In Ohio, 74.9% view government regulation as extremely important, the highest among all states.
- 51.5-72.1% agree or strongly agree that companies extensively using AI resources should be required to pay a special tax, compensate for workforce layoffs or contribute to retraining for employees displaced by the increased use of AI in the workplace.

Strong support for regulation indicates that fears regarding the development of artificial intelligence could be alleviated through government guidelines and regulations. These numbers are generally high across all states, with nearly unanimous support.

Certain policies, such as requiring companies that make significant use of AI resources to compensate for workplace disruptions caused due to AI, also found strong support.

Interestingly, states where people are most optimistic about AI, such as Illinois, Indiana, and Michigan, also have the strongest support for regulation, indicating that optimism regarding artificial intelligence and support for regulation go hand in hand.

STATE HIGHLIGHT: NORTH DAKOTA

Despite being a rural state, North Dakota shows more optimistic views on AI in several areas compared to other rural states:

- 34.7% see high or very high potential for AI in agriculture, compared to 18.8% in Oklahoma and 17.7% in Louisiana.
- 28.6% believe AI will impact entrepreneurs somewhat or very positively, versus 15.3% in Oklahoma and 11.4% in Louisiana.
- 40.3% are likely to use AI for personal reasons, higher than most other states surveyed.

North Dakota's relatively optimistic outlook suggests that targeted artificial intelligence applications in dominant local industries could improve overall AI sentiment and adoption.

CONCLUSION

Artificial intelligence has gone from science fiction to a full-blown reality seemingly overnight with the roll out of large language models like OpenAI's ChatGPT, Google's Gemini, Microsoft's Copilot and others bursting onto the scene all within the last year or two. AI is one of the most (if not the most) complex technologies ever created, and it's difficult for the general public to understand not only what the technology is but where it's being used and for what purpose.

Today, individuals stress over the potential for artificial intelligence to take away jobs, impact their careers and make unethical decisions. The general sentiment about AI is that it's bad. But that is the general sentiment. When we start to get specific about where AI could be applied or how it might be regulated, people start to engage more positively. This could indicate that people need more clarity about the technology and how it will be used. When we start to offer that, either through industry-specific applications of the technology or the promise of government regulation—a process through which we would naturally need to understand AI more clearly—people become more receptive.

Perhaps that is what the data reveals—that the general public doesn't know enough about AI to understand if they should be afraid. That, very naturally, people feel anxious about the technology because it is a large and looming morass on the horizon growing ever closer, but when we create greater transparency about the technology, attitudes change. So perhaps what is needed more than anything right now, is for someone to help lead that dialogue—cross-industry, cross-sector conversations that can provide a little illumination into the nebulous world of this brave new technology.

APPENDIX

Methodology

Aaru uses artificial intelligence powered simulations to conduct hyper-accurate polls rapidly and with no human bias. Survey respondents use language modeling in order to understand context, think through issues and make decisions.

This simulation included at least 500 respondents per state, with a margin of error of ±4.383% within each state, conducted with data accurate as of June 27, 2024. Respondents are representative of the demographics within their state, each being 15 or older.

Aaru recreates digital environments including recent news, social media and other relevant context. Then, these environments are populated with artificial intelligence-powered respondents, who are generated based on the likelihood for a real human with a given profile to exist in any geography. Probability distributions for demographics are generated based on official US American Community Survey data, ensuring all respondents are representative of real people living in any target geography.

Each respondent is given a profile then asked to imagine they were the target profile, and to respond to all questions within the context of the assigned personality. Respondents are then provided with access to context, which they can choose to read if they desire, and then asked questions as would be done in a traditional poll. Respondents think and reason through questions in a multi-step process called a "reasoning pipeline." This pipeline presents a clear, coherent chain of reasoning leading to the conclusions and preferences of the respondent.

Respondents respond with total accuracy with how they feel as Aaru can access respondents' internal dialogue through the pipeline process. Aaru also regularly tests for alignment to ensure that environments stay as unbiased and fair as possible.

Oftentimes, this methodology can produce more accurate results than traditional polls, which rely on respondents being asked a series of questions usually via telephone. Respondents in traditional polls may be influenced by social biases when answering surveys and thus reluctant to answer honestly. This can lead to discrepancies between poll data and outcomes in traditional polls. Aaru's methodology does not suffer from this as respondents are not influenced by social constraints, like the fear of judgement.

Demographic distributions

Dist.	Group	MI	OK	IL	AL	IN	LA	ND	OH	TN
Age	15-24	0.169	0.154	0.157	0.170	0.138	0.141	0.178	0.140	0.162
	25-34	0.137	0.151	0.144	0.137	0.151	0.172	0.125	0.156	0.130
	35-44	0.159	0.126	0.143	0.112	0.123	0.159	0.149	0.149	0.174
	45-54	0.127	0.148	0.145	0.157	0.164	0.154	0.151	0.166	0.139
	55-64	0.149	0.152	0.176	0.137	0.185	0.140	0.168	0.149	0.158
	65-74	0.142	0.127	0.103	0.140	0.107	0.132	0.121	0.105	0.116
	75-84	0.073	0.087	0.080	0.098	0.088	0.056	0.066	0.083	0.078
	85-120	0.045	0.054	0.052	0.048	0.044	0.045	0.042	0.053	0.043
Gender	Male	0.504	0.513	0.469	0.504	0.511	0.512	0.508	0.518	0.484
	Female	0.496	0.487	0.531	0.496	0.489	0.488	0.492	0.482	0.516
Race	White	0.742	0.729	0.724	0.685	0.824	0.633	0.818	0.824	0.778
	Black	0.149	0.079	0.171	0.269	0.095	0.271	0.038	0.122	0.147
	Native Amer.	0.013	0.116	0.004	0.005	0.009	0.010	0.072	0.009	0.010
	Asian	0.033	0.023	0.056	0.007	0.027	0.009	0.016	0.018	0.017
	Pacific Island.	0.013	0.000	0.000	0.016	0.002	0.000	0.004	0.007	0.008
	Two or More	0.051	0.052	0.045	0.016	0.044	0.077	0.052	0.020	0.039