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Trustworthy AI empowers diversity in tech

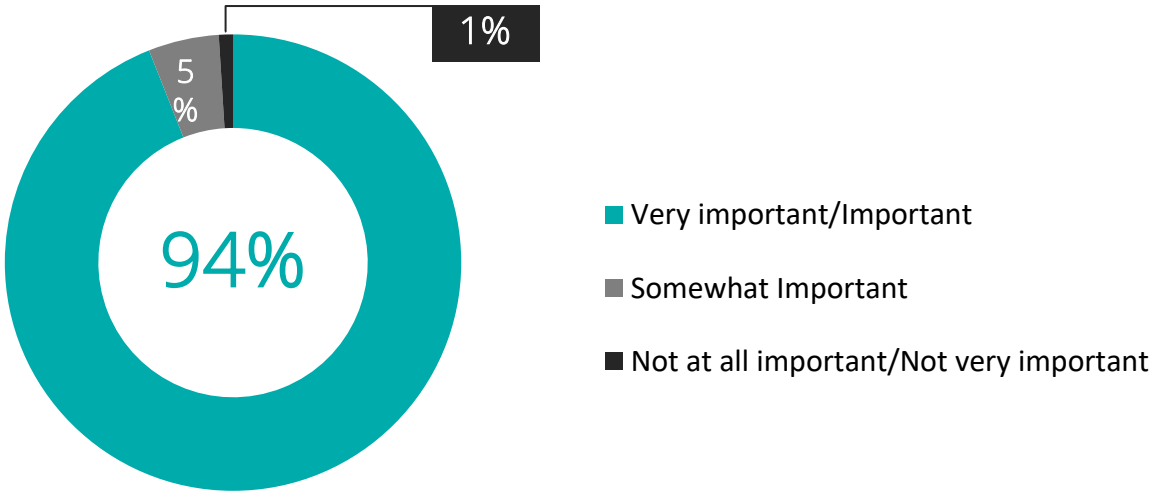
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94% of business leaders surveyed see AI to be critical for organization's / agency's overall success over the next five years

Importance of AI solutions for organization's / agency's overall success



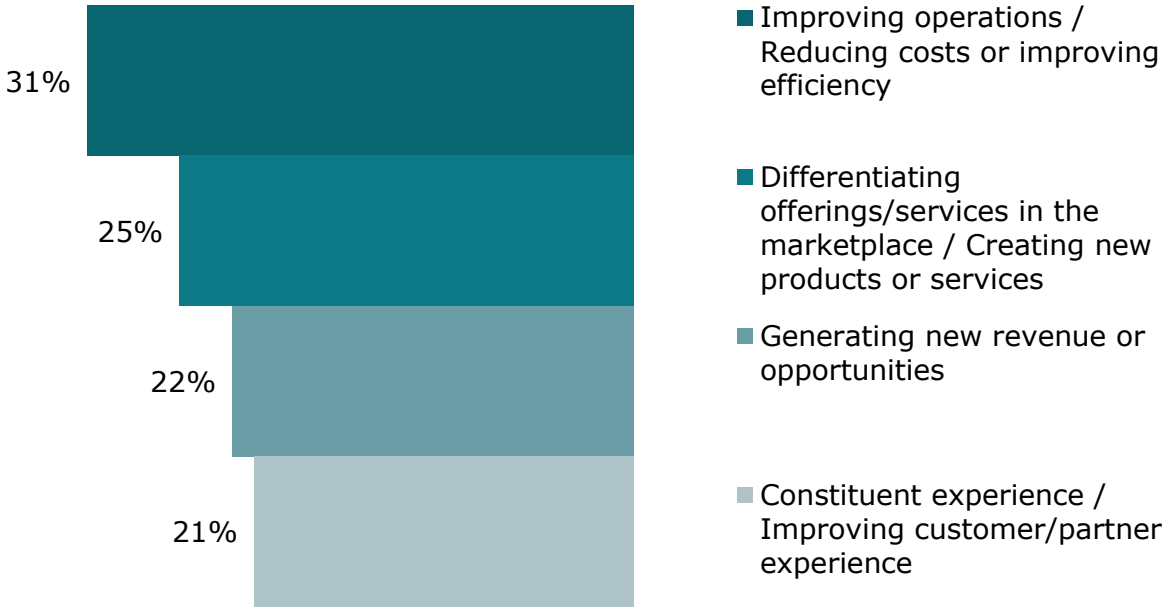
Q. In your view, how important are artificial intelligence (AI) solutions for your overall organization / agency over the next 5 years?

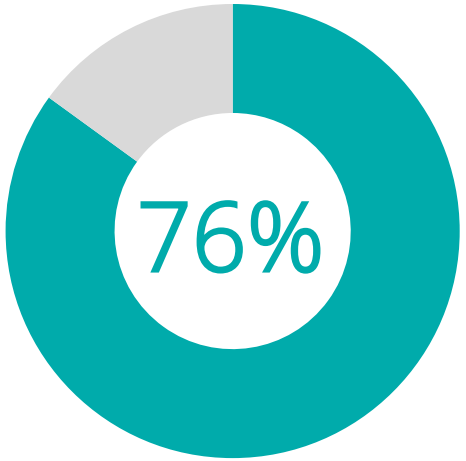
N=2,620 respondents

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76% of leaders surveyed, plan to increase their AI investments in the next fiscal year—with purpose

Average breakdown of AI investments (by purpose)







Increasing investment
of surveyed companies are expected to increase their investment next fiscal year by more than 5%.

Q1. What percentage of your AI investments are focused on improving operations (e.g., manufacturing, customer service, marketing) vs. being built into your core [service / products or services to differentiate your offerings in the marketplace]?
Q2. How do you expect your organization's investment in AI technologies to change in the next fiscal year?

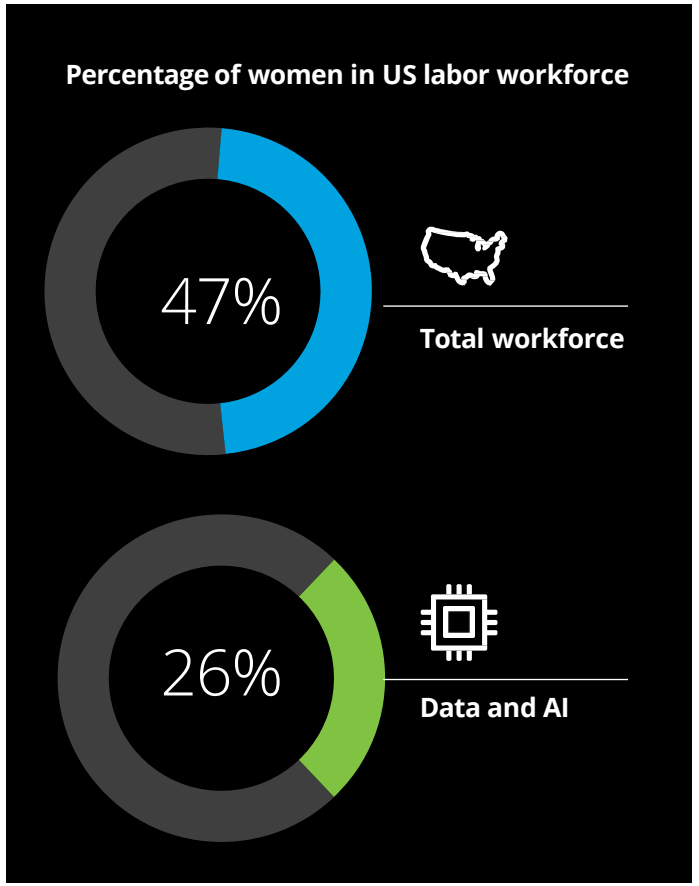
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N=2,620 respondents

What is the state of women and diversity in AI today?

Despite the surging demand for AI....

- In a 2020 World Economic Forum report, women who make up 47% of the total work force, make up only 26 percent of data and AI positions in the workforce[6]
- Stanford Institute for Human-Centered AI's 2021 AI Index Report found that women make up just 16 percent of tenure- track faculty focused on AI globally[7]
- The percentage of black and Latinx employees at major tech companies is also especially low, about 1–3% of the tech workforce
- Diversity is also lacking among entrepreneurs and the venture capitalists who invest in them



So, what is driving this sustained diversity gap in AI, how can we address it, and why does it matter?

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Why gender diversity in AI and business matters

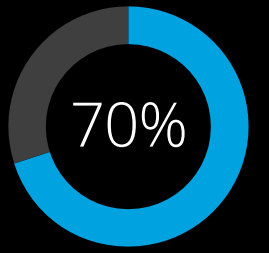
Today, evidence is reinforcing that gender diversity, particularly among leadership positions, drives increased productivity, profitability, and market value for organizations across industries

- Studies show, that diversity on executive boards increased average share prices by 44%
- Diverse executive leadership has **yielded higher net returns in certain markets than companies not committing to gender diversity**[12]
- In western Europe, a **10 percent increase in the ratio of women to men in the workforce correlated with a 7 percent increase in market value**[15]

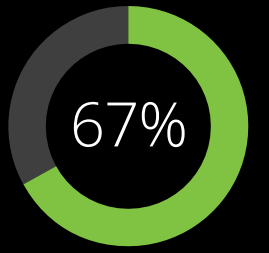
The business case

Deloitte's survey[10] with women and men working in AI and machine learning further demonstrated that having more women within an organization can only benefit a business.

Respondents strongly agreed:



Companies that promote and elevate diverse groups within their organization will benefit as a result.



Having more women in managerial, leadership, and role model positions directly benefits an organization's employees.

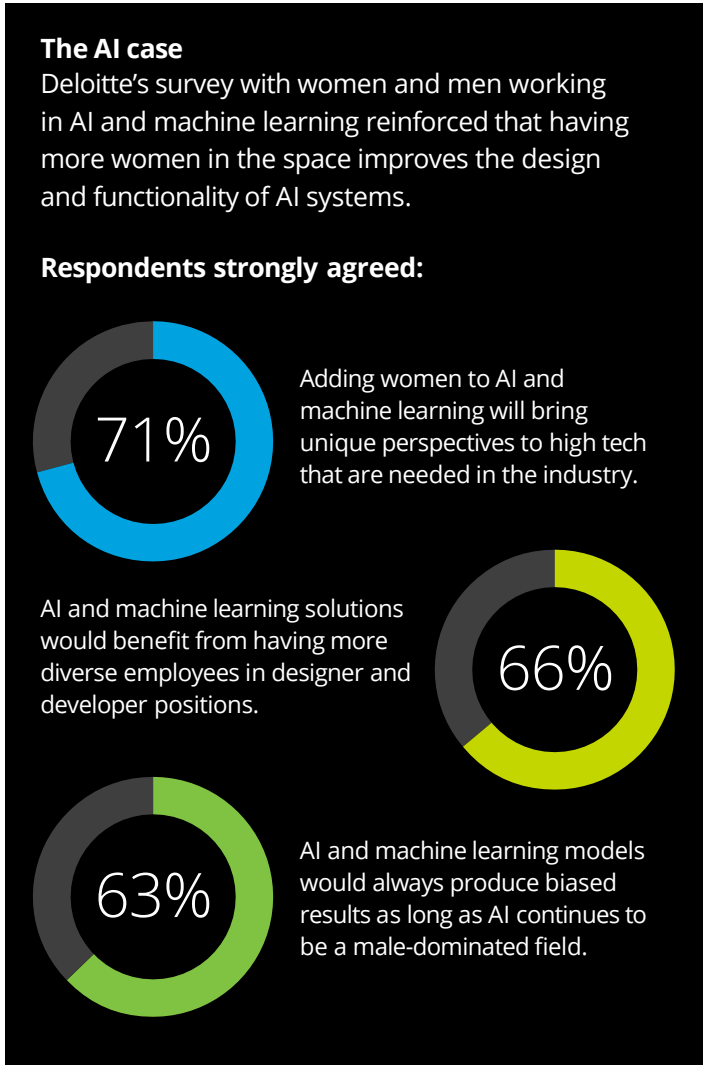
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Women in AI: Why gender diversity matters

- Data shows that companies with diverse and inclusive cultures are fueling productivity and innovation within their workforces, translating into better products, a competitive edge over peers, and improved sales and profit[16]

- In order to build effective AI systems—an AI team should be as diverse as the populations that its AI will impact.[17]

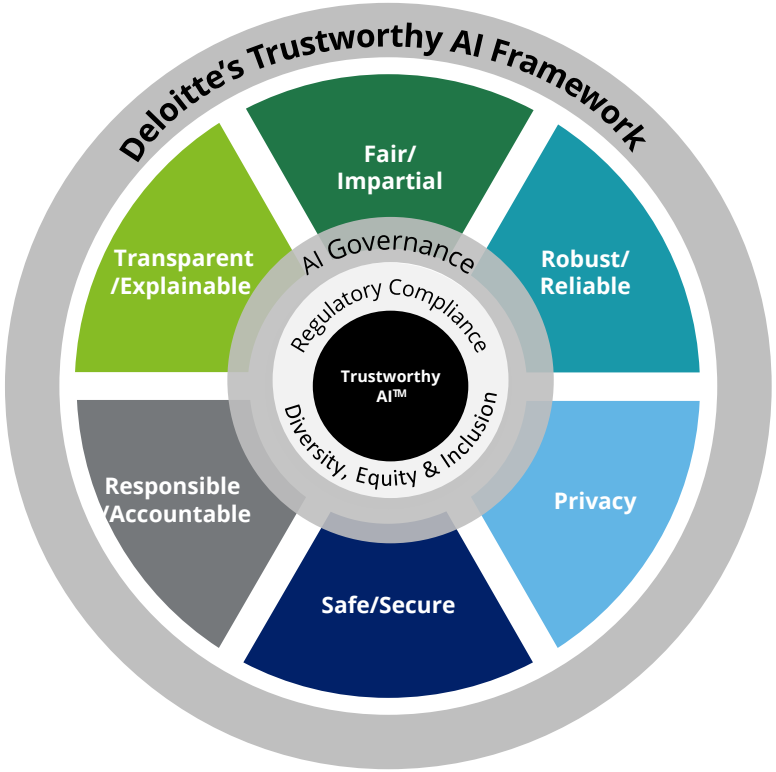
Having diversity across several criteria helps promote a wide range of perspectives and lived experiences, which are then, incorporated into the design and implementation of an AI system



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The importance of diversity within AI teams is connected to one of the biggest challenges facing AI today, establishing trust

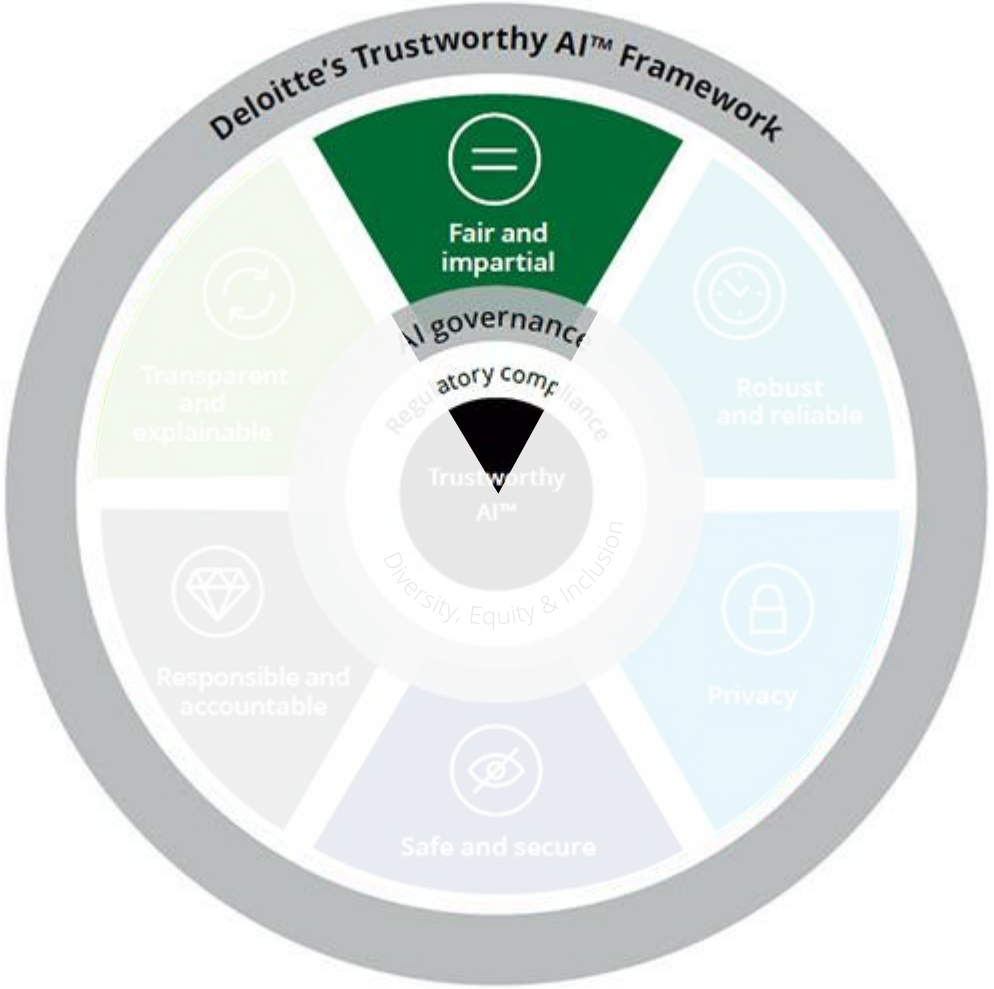
- And an organization needs a common language so they can effectively articulate trust with internal and external stakeholders
- Deloitte's six-part framework is an effective step in diagnosing the ethical health of AI, while maintaining customer privacy
- Regulatory compliance and diversity, equity, and inclusion support all aspects of the Trustworthy AI framework



A more diverse workforce is better equipped to identify and remove AI biases as they interpret data, test solutions, and make decisions, leading to responsible and accountable AI

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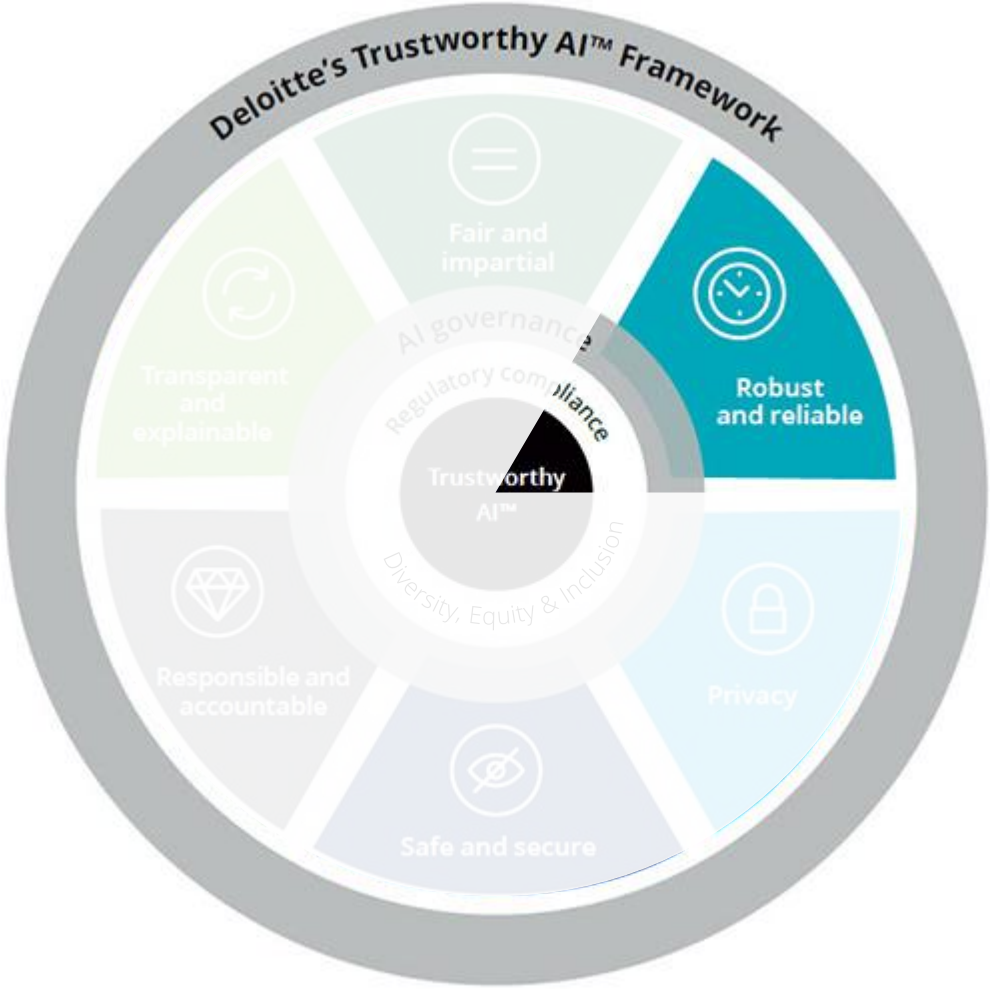
Assess whether AI systems include internal and external checks and balances to enable equitable applications across all participants



- Does an organization have the right policies/controls in place to ensure algorithms maintain fairness?
- How does your organization evaluate the monitor the data user? Is the data a fair representation of the relevant population?
- How would your organization defend its position on AI fairness?
- Has your organization considered risks related to third-party partners developing/deploying AI solutions?

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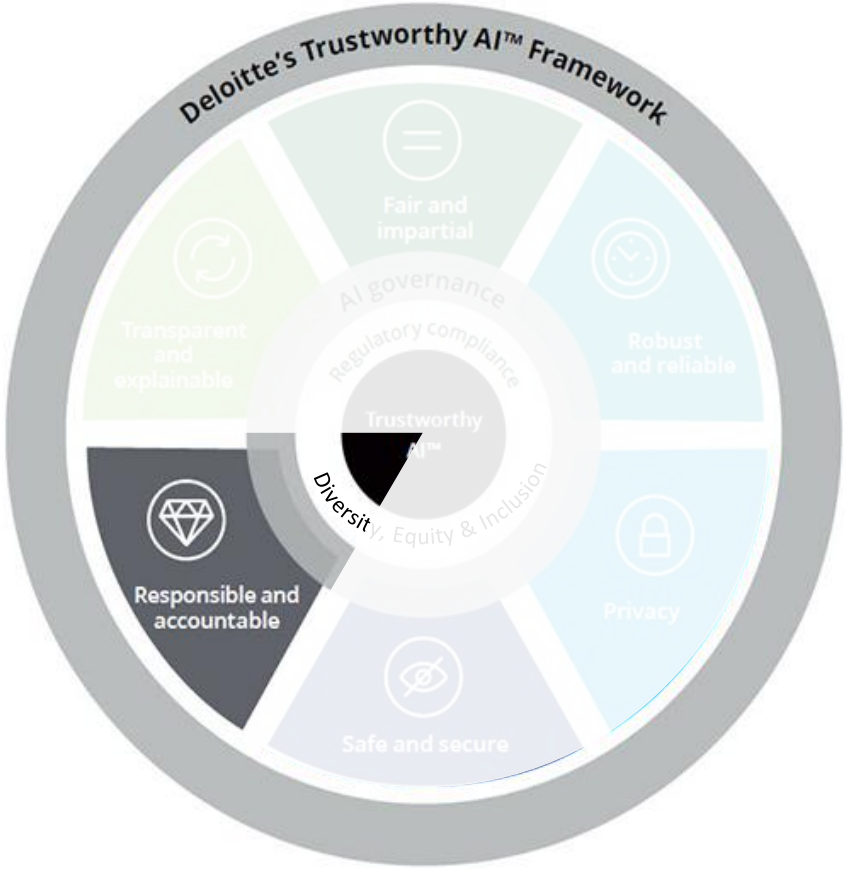
Confirm that AI systems can learn from a diverse set of humans and other systems and produce consistent and reliable outputs



- Can your organization's AI systems perform as intended in less-than-ideal conditions? Will the algorithm produce reliable results with each new set of data?
- What processes need to be in place when inconsistencies or issues are discovered?
- Does your organization have plans to address deficiencies in a time-sensitive manner?

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Cultivate a team with diverse perspectives to challenge assumptions, weed out unconscious biases, and identify unseen areas within an AI system to help ensure it has a positive impact on as many populations as possible



Responsible

- Is your organization using AI in a way that is responsibility in terms of impact on the business, stakeholders, end users and broader society?
- Do you have a strategy for making decisions on responsible AI use?
- Does the potential good that a model can achieve or outweigh the potential negative outcomes?

Accountable

- Do your organizations employees and customers know when they are using AI and are they familiar with your organizations policies?
- Is it clear who is ultimately accountable for AI and related outputs? Who is monitoring?
- Do you have management reporting in place to ensure that those charged with governance has visibility into the dynamics of deploying AI systems?

While there are several considerations for having trustworthy AI throughout your organization; diversity in AI design and development can have a direct impact on whether your AI is responsible and accountable

So, what is driving the diversity gap?

Women often face a continuous battle for credibility → Women interviewed noted having to constantly prove themselves credible and experienced when interacting with their male colleagues.

The lack of a woman archetype in AI can be damaging→ Women struggle with lack of seeing individuals who "look like them" in leadership roles

Women leaders can also face discrimination as a result of not fitting the established male-dominated mold in AI → People tend to look for leaders in what has been successful in the past

Cultural and social challenges still exist→ False stereotypes perpetuate the ideal that girls are not as capable as boys in math and science

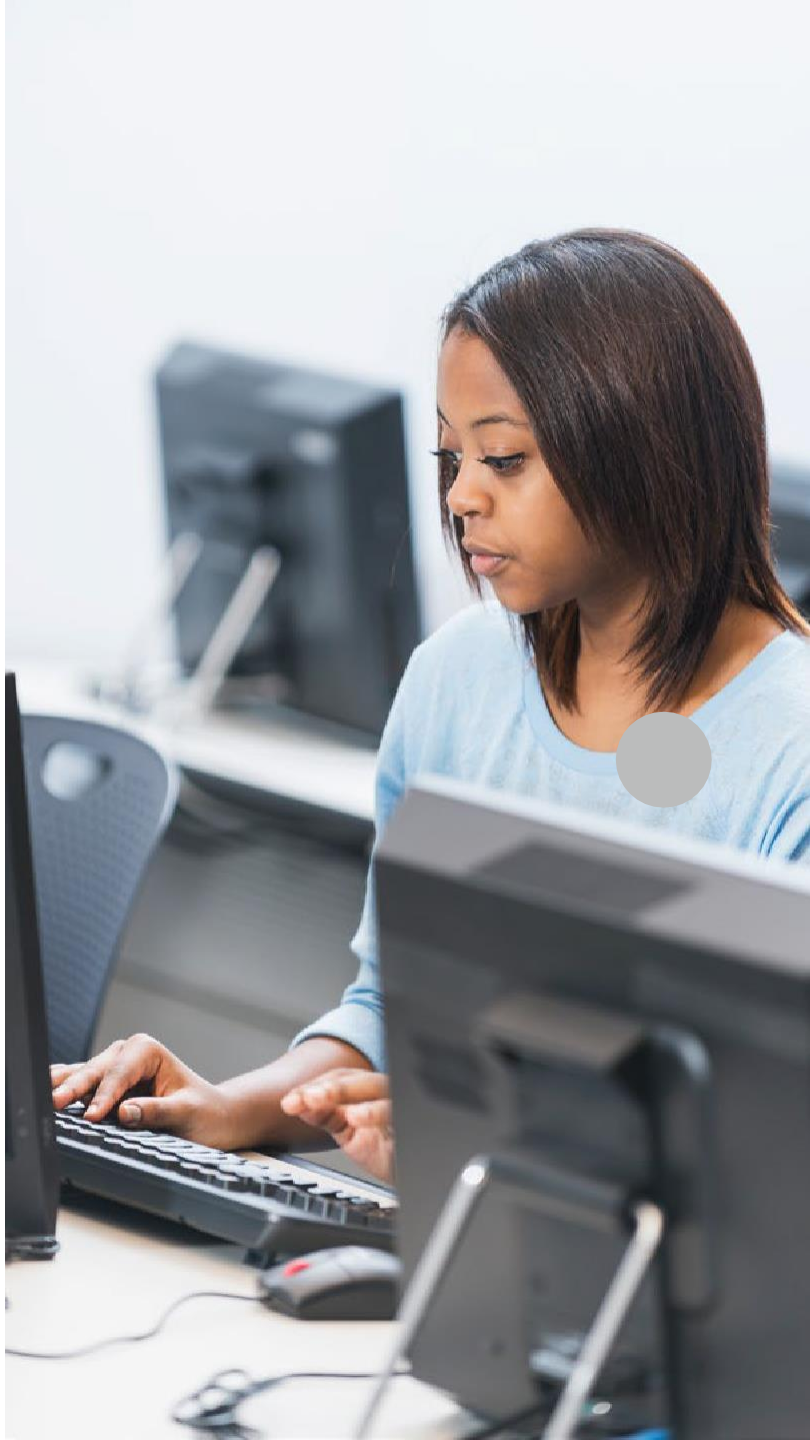


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What's the solve? And how do we create a path for future women and minorities in AI?

- ✓ Mentorship is key
- ✓ Embrace the many paths to AI
- ✓ Treat women and minorities equitably
- ✓ Build and showcase archetypes of women in AI
- ✓ Provide opportunities for education early, and often

Create a culture of diversity and inclusion at all levels



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Thank you!

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Endnotes

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2. David Jarvis, *The AI talent shortage isn't over yet,* Deloitte Insights, September 30, 2020.
3. LinkedIn, *2020 Emerging Jobs Report.*
4. Bureau of Labor Statistics, *Employed persons by detailed industry, sex, race, and Hispanic or Latino ethnicity; Labor force statistics from the Current Population Survey.*
5. Council of Graduate Schools (CGS) and Graduate Record Examinations Board (GRE), *Graduate Enrollment and Degrees: 2009 to 2019.*
6. World Economic Forum, *Global Gender Gap Report 2020.*
7. Stanford Institute for Human-Centered AI, *Artificial Intelligence Index Report 2021,* March 3, 2021.
8. Ibid.
9. As part of the Women in AI Whitepaper, Deloitte interviewed 12 women executives.
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    Using multiple choice questions, we collected information about the experts' demographics and professional experiences. Topics covered included educational history, interpersonal interactions at every stage of the job search cycle, and company policies or federal/state laws that would affect how the AI/ML industry approaches hiring. The demographics questions allowed us to track trends across gender, race, sexuality, and ability in the AI/ML industry.
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12. MSCI, *MSCI USA IMI Womens Leadership Index (USD),* January 29, 2021.
13. MSCI, *MSCI Canada IMI Women's Leadership Select Index (CAD)*, January 29, 2021.
14. MSCI, *MSCI Europe Womens Leadership Index (USD), January 29, 2021.* Note: Tracks only performance of large and mid-cap stocks – does not include small-cap stocks.
15. Stephen Turban, Dan Wu, Letian (LT) Zhang, *Research: When Gender Diversity Makes Firms More Productive, Harvard Business Review,* February 11, 2019.
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17. Ronit Avni, Rana el Kaliouby, *Here's why AI needs a more diverse workforce,* World Economic Forum, September 21, 2020.

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