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Opinion: How Intel is Refining Its Approach to Responsible AI

Artificial intelligence has created tremendous opportunity for innovation, and responsible practices to support it are more important than ever.

SANTA CLARA, Calif.--(BUSINESS WIRE)-- *The following is an opinion editorial from Lama Nachman, Intel Fellow and director of the Intelligent Systems Research Lab at Intel Labs.*

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20240402656092/en/

Lama Nachman, Intel Fellow and director of the Intelligent Systems Research Lab at Intel Labs, writes that responsible AI practices are more important than ever. (Credit: Intel Corporation)

I've always admired Intel's ability to anticipate how future technology might ignite social change. That's why in 2017, even before AI was as prevalent as it is now, we launched our responsible AI (RAI) program. Since then, we have seen how AI and, more specifically, deep learning have made significant progress in advancing many fields, including healthcare, financial services and manufacturing.

More: The Four Pillars of Responsible AI Development (Video) | Artificial Intelligence at Intel (Press Kit)

We also have seen how the rapid advancement of large language models (LLMs) and increased access to generative AI applications have changed the world. Today, powerful AI tools are accessible to people without formal AI skills. This has enabled people around the world to discover and use AI capabilities at scale, improving how they work, learn and play. While this has created tremendous opportunity for innovation, there has also been an increased concern around misuse, safety, bias and misinformation.

For all these reasons, responsible AI practices are more important than ever.

We at Intel believe that responsible development must be the foundation of innovation throughout the AI life cycle to ensure AI is built, deployed and used in a safe, sustainable and ethical way. As AI continues to rapidly evolve, so do our RAI efforts.

Internal and External Governance

A key part of our RAI strategy is using rigorous, multidisciplinary review processes throughout the AI life cycle. Internally, Intel's advisory councils review various AI development activities through the lens of grounding principles:

- Respect human rights

- Enable human oversight
- Enable transparency and explainability
- Advance security, safety and reliability
- Design for privacy
- Promote equity and inclusion
- Protect the environment

Much has changed with the rapid expansion of generative AI, and we've changed with it. From developing standing guidance on safer internal deployments of LLMs, to researching and developing a taxonomy of the specific ways that generative AI can lead people astray in real-world situations, we are working hard to stay ahead of the risks.

With the expansion of generative AI have also come growing concerns about the environmental impact of AI, so we have added "protect the environment" as a new grounding principle, consistent with Intel's broader environmental stewardship commitments. While there is nothing simple about addressing this complex area, responsible AI has never been about simplicity. In 2017, we committed ourselves to addressing bias even as methods were still being developed to tackle it.

Research and Collaboration

Despite the great progress that has been made in responsible AI, it is still a nascent field. We must continue to advance the state of the art, especially given the increased complexity and capacity of the latest models. At Intel Labs, we focus on key research areas including privacy, security, safety, human/AI collaboration, misinformation, AI sustainability, explainability and transparency.

We also collaborate with academic institutions worldwide to amplify the impact of our work. Recently we established the Intel Center of Excellence on Responsible Human-AI Systems (RESUMAIS). The multiyear effort brings together four leading research institutions: in Spain, the European Laboratory for Learning and Intelligent Systems (ELLIS) Alicante, and in Germany, DFKI, the German Research Center for Artificial Intelligence, the FZI Research Center for Information Technology and Leibniz Universität Hannover. RESUMAIS aims to foster the ethical and user-centric development of AI, focusing on issues such as fairness, human/AI collaboration, accountability and transparency.

We also continue to create and participate in several alliances across the ecosystem to come up with solutions, standards and benchmarks to address the new and complex issues relating to RAI. Our engagement in the MLCommons® AI Safety Working Group, the AI Alliance, Partnership on AI working groups, Business Roundtable on Human Rights and AI and other multistakeholder initiatives have been instrumental in moving this work forward – not just as a company, but as an industry.

Inclusive AI/Bringing AI Everywhere

Intel believes that responsibly bringing "AI Everywhere" is key to the collective advancement of business and society. This belief is the foundation of Intel's digital readiness programming, working to provide access to AI skills to everyone, regardless of location, ethnicity, gender or background.

We were proud to expand our AI for Youth and Workforce programs to include curriculum around applied ethics and environmental sustainability. Additionally, at Intel's third-annual AI Global Impact Festival, winners' projects went through an ethics audit inspired by Intel's multidisciplinary process. The festival platform also featured a lesson in which more than 4,500 students earned certifications in responsible AI skills. And, for the first time, awards were given to project teams that delivered innovative accessibility solutions using AI.

Looking Ahead

We are expanding our efforts to comprehend and mitigate the unique risks created by the massive expansion of generative AI and to develop innovative approaches to address safety, security, transparency and trust. We are also working with our Supply Chain Responsibility organization to accelerate progress addressing the human rights of AI global data enrichment workers (i.e., people who make AI datasets usable through labeling, cleaning, annotation or validation). Addressing this critical issue will require industrywide efforts, and we're leveraging our two decades of experience tackling issues like responsible sourcing and forced labor to help move the global ecosystem forward.

Across responsible AI, we are committed to learning about new approaches, collaborating with industry partners and continuing our work. Only then can we truly unlock the potential and benefits of AI.

Lama Nachman is an Intel Fellow and director of the Intelligent Systems Research Lab at Intel Labs.

About Intel

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