New ACM TechBrief Argues That Both Trust and Trustworthiness Are Essential for AI Systems

Influential Technology Policy Group Highlights Urgent Considerations as Regulations and Standards are Developed

New York, NY, January 18, 2024 – The Association for Computing Machinery’s global Technology Policy Council (TPC) has released its “TechBrief: Trusted AI.” It is the latest in a series of TechBriefs—short technical bulletins that present scientifically grounded perspectives on the impact and policy implications of specific technological developments in computing.

“TechBrief: Trusted AI,” co-authored by two US and European experts, highlights the key challenge that trustworthiness mechanisms and measures being advanced in AI regulations and standards may not actually increase trust.

“So much of the public conversation about regulating AI systems has focused on issues including accuracy or transparency,” explained John T. Richards, a Distinguished Research Scientist at IBM in the US and co-lead author of the new TechBrief. “But there is much less discussion about how the public comes to view an AI system as ‘trustworthy.’ In preparing this TechBrief, we found that the public’s perspective on what makes AI trustworthy will often diverge from the perspective of technologists and policy makers. We hope this TechBrief begins a conversation that will encourage industry leaders and policymakers to put the issue of trustworthiness front and center.”

“As AI is becoming pervasive, more and more institutions are using it,” added Bran Knowles, a Professor at Lancaster University, UK and co-lead author of “TechBrief: Trusted AI.” “These institutions include government agencies, major corporations, healthcare providers, and even schools. The danger is that a lack of public trust of AI may not only impact the acceptance of these new technologies but might also erode trust in the institutions that are using it. For these reasons, there is an urgent need for an examination of how public trust is developed around AI technologies.”
Key findings underscored in the TechBrief include:

- It is important that AI being used in workplaces and everyday life not only be engineered to be trustworthy, but actually be trusted.
- Trust of AI is subtly different from trust of other technologies.
- Trust arises from a complex interplay of beliefs, feelings, and attitudes.
- The public’s distrust can reveal harms that those developing, deploying, and regulating AI fail to see.

“TechBrief: Trusted AI” is being published at a moment when AI innovations, such as the release of ChatGPT in 2022, are being covered heavily in the media, corporations are investing billions of dollars in the technology, and governments around the world are announcing major AI initiatives,” explained Stuart Shapiro, Chair of the ACM TPC’s TechBriefs Committee. “It is also noteworthy that some companies are now developing ‘Trustworthy AI’ badges to place on their products, which are intended to indicate that products have been through a review process. Because these advances in AI have been so remarkable and so rapidly disseminated, it is natural that the public views AI as mysterious and that many have concerns. This is particularly the case for historically marginalized groups whose lived experience can engender distrust of AI-based systems. This new brief is designed to bring important issues to light which we hope will ultimately lead to greater public confidence in AI-based systems.”

The key Policy Implications of the Trusted AI TechBrief are:

- The effectiveness of mechanisms and metrics implemented to promote trust of AI must be empirically evaluated to determine if they actually do so.
- Distrust of AI implicates trustworthiness and calls for a deeper understanding of stakeholder perceptions, concerns, and fears associated with AI and its specific applications.
- Fostering public trust of AI will require that policymakers demonstrate how they are making industry accountable to the public and their legitimate concerns.

ACM’s TechBriefs are designed to complement ACM’s activities in the policy arena and to inform policymakers, the public, and others about the nature and implications of information technologies. As with all TechBriefs, TechBrief: Trusted AI includes an overview of the major policy implications of the technology, key statistics to put the issues in context, a narrative introduction to educate the public, and key conclusions.

TechBrief: Trusted AI is the third and final installment in a series on systems and trust. The two prior briefs in the series focused on the data trust deficit and safer algorithmic systems. Earlier TechBriefs have covered generative artificial intelligence, climate change, facial recognition, smart cities, quantum simulation, and election auditing. Topics under consideration for future issues include media disinformation, content filtering, blockchain, accessibility and more.
About the ACM Technology Policy Council

ACM’s global Technology Policy Council sets the agenda for global initiatives to address evolving technology policy issues and coordinates the activities of ACM’s regional technology policy committees in the US and Europe. It serves as the central convening point for ACM’s interactions with government organizations, the computing community, and the public in all matters of public policy related to computing and information technology. The Council’s members are drawn from ACM's global membership.

About ACM

ACM, the Association for Computing Machinery, is the world’s largest educational and scientific computing society, uniting computing educators, researchers, and professionals to inspire dialogue, share resources, and address the field’s challenges. ACM strengthens the computing profession’s collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.

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