WILEY

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National Institute of Standards and Technology
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RE: Request for Information on NIST's Assignments Under Sections 4.1, 4.5 and 11 of the Executive Order Concerning Artificial Intelligence [Agency/Docket Number - Notice: 2023–0009; Document Number: 231218-0309]

Dear Ms. Trello:

Thank you for the opportunity to share our views on artificial intelligence and copyright. We appreciate this important feedback mechanism and look forward to working with the National Institute of Standards and Technology and other stakeholders to deliver meaningful input and help develop policy outcomes in response to the Executive Order Concerning Artificial Intelligence, which will harness the benefits of AI while ensuring robust copyright protections.

Founded in 1807, Wiley is one of the world's largest publishers and a global leader in research and learning. For more than 215 years, we've consistently operated within academic integrity principles, which has solidified our trusted status among academic institutions. This deep and diverse involvement with the academic community positions us as a dependable partner that can help navigate the complexities of integrating AI into research and learning. We are proud to support researchers and learners by providing them with the highest quality content and services, helping to improve outcomes and livelihoods and support national productivity and innovation.

AI, which is inclusive of generative large language models, has the potential to dramatically transform the scholarly research and learning sectors. Today, it can unlock significant productivity improvements by detecting plagiarism, extracting critical information, classifying and recommending content, conducting technical and language checks, and bringing together related information from disparate sources. However, it can just as easily produce fake papers, falsify the peer review process, and erode the protection of intellectual property (IP) rights.

Wiley sees AI as having an immense potential to strengthen our ability to deliver trusted, high-quality knowledge and knowledge solutions. AI supports the publishing journey and aids domain-specific research by identifying concepts, hidden relationships, generating hypotheses, and discerning opinions, such as predicting protein shapes in biomedical research and modeling the impacts of climate change in environmental science. It serves as a valuable tool that can directly assist researchers in addressing scientific problems and advancing knowledge across various

fields. Through AI, we see potential opportunities to enhance how we help the world's top scholars, researchers, and experts share their knowledge more effectively, as well as the consumers of this knowledge to absorb and apply it more quickly.

It is our firm belief that in order to be truly effective, any policy framework that aims to address AI should:

- Respect existing intellectual property protections and require the use of licensing for copyrighted materials in the training of AI language models;

- Require transparency and accountability from AI tools to ensure their legal compliance, support accuracy, and reduce the potential for erroneous output;

- Include expanded national funding for AI research and development (R&D) that recognizes the cost of peer-review, editing, publication, distribution, and long-term stewardship of research; and

- Protect the integrity of research by incorporating defensive mechanisms that can identify fraudulent research accelerated by AI and produced under the guise of legitimacy by "paper-mills."

In addition, we encourage AI policy frameworks to:

- Avoid the establishment of blanket-statement AI regulation that does not consider the different types of AI, the individual applications, and specific risks they pose to society;

- Protect the rights and safety of individuals by requiring safeguards and extensive testing of AI models for algorithmic bias and discrimination; and

- Leverage the many services currently provided by organizations, including publishers and learning service providers like Wiley, to advance the ethical discovery and innovation of AI.

Our over 200-year history of weathering technological disruptions testifies to our unwavering commitment to quality and integrity. Together, we are creating the tools and infrastructure to advance research and learning in the 21st century, and ensuring this system is imbued with the values of rigor and integrity; academic freedom; openness; partnership; diversity, equity, and inclusion (DE&I); and respect for innovation, commercialization, and IP rights. In the future, AI technology may be able to independently conduct primary research, generate innovative insights, and disseminate its own findings. It may also enable personalized learning at a mass scale. In that world, Wiley's role as a publisher—providing editorial oversight and a seal of approval—is more crucial than ever before.

1. How can AI-related harms pertaining to repression, interference, and human rights abuses be addressed and mitigated?

Humans in the Loop

Wiley believes AI, especially in the context of research and learning, must include humans as part of the equation. While AI has the potential to introduce efficiency gains, the core products, IP, and artifacts of our work will still require close human oversight and management. Human intelligence is critical to discerning the validity of conclusions, so there should be no AI 'black box' in the chain of scholarly discovery. People are a crucial part of assigning meaning to patterns identified by automated systems. We recognize the importance of humans to determine bias in AI and the importance of human assessments and decision making, too. This oversight ensures the authenticity and quality of our services, enhancing the value we provide to our customers. As we continue to navigate and incorporate these technological advancements, we will remain steadfast in our commitment to uphold academic integrity and trust.

Rights and Safety

Today, AI systems are increasingly used to make decisions that affect important aspects of everyday life and business, such as hiring processes, college acceptances, housing approvals, and financial assistance. Wiley shares the concerns that have been expressed globally by individuals, industries and governments around individual human rights and privacy impacts by generative AI tools. Use of these tools will ultimately depend on their providers adequately addressing these inherent risks. The safety and security limitations of generative AI are not yet fully understood, and legal frameworks need to catch up with the technology. If these challenges can be met, and the right balance of efficiency with human creativity can be achieved, generative AI could become as integral to scholarly publishing as the internet itself. It is imperative that civil rights and consumer protections remain enforceable as the landscape continues to evolve. To ensure legal protections are keeping pace with evolving technologies, Wiley joins others in calling on federal agencies to conduct comprehensive reviews of existing protections and enforcement authorities to determine whether updates are needed to address developments of AI. The rights of organizations must also be protected, particularly with respect to copyright or IP infringement by AI models.

Equity in Learning

AI has the potential to enhance equity in learning through personalization of content and the pace of instruction, virtual tutors, data analytics for educators, and adaptive assessments that can evaluate a student's performance and provide constructive feedback. However, the use of AI for learning purposes, in its current state, is inadequate for entirely closing gaps in learning opportunity. So far, the focus of AI for learning purposes has been deficit-based, in which the technology attempts to pinpoint where a student is lacking and provide instruction to fill that specific gap. There is a need for the development of an asset-oriented AI, where there is an identification of competencies or assets that a student has and then uses those to build the student's knowledge. AI models cannot be fully equitable if they fail to recognize or build upon each student's sources of competency in the same way that a human instructor would.

Furthermore, most adaptability models count students' wrong answers and decide whether to speed up, slow down, or offer a different type of learning support. Yet, right and wrong answers are not the only learning goals. We want students to learn how to self-regulate when they experience difficulties in learning, such as being able to persist in working on a difficult problem or knowing how and when to ask for help. As students grow, we want them to develop agency and be able to act on their own or in groups to advance learning objectives.

To support efforts in reducing the risks associated with AI, Wiley has a dedicated Diversity, Equity, and Inclusion (DE&I) team assisted by volunteers representing a variety of business functions. Together, the team has enacted a broad range of internal and external policies and practices focused on creating an inclusive environment and improving the experiences of our authors, peer reviewers, editors, editorial board members, society partners, students, and staff. Wiley has also signed the Joint Commitment for Action on Inclusion and Diversity in Publishing to pool our resources with other publishers to take decisive action. We encourage others to take the necessary steps of following inclusive marketing guidelines and establishing DE&I teams in support of the safe development and use of AI.

2. What roles can or should be played by AI developers, deployers, and end users in managing risks and harms of generative AI? What do you recommend AI developers incorporate into their governance practices to manage the risks of generative AI?

Accountability and Transparency

Wiley remains concerned with the lack of transparency and oversight regarding the potential for illegal accumulation and unauthorized use of restricted content as an input for model training purposes (and for that information to be provided to others), as this will create significant implications for IP protection. Moreover, the terms and conditions for using generative AI models lack clear and open transparency as they are determined solely by the service provider, without any consideration for the existing IP rights of others. For example, the information entered into and received from these models is subject to licensing terms with no opportunity to negotiate proper protections. The terms of use may require you to represent that you own or have legal rights to use the input with the service, which is lacking review and enforcement by the provider. The terms of use also do not warrant that the output is original and does not protect from third-party IP infringement claims, breach of confidentiality claims, or claims of violation of privacy or other applicable laws.

Wiley encourages efforts to improve public transparency and provenance to enable users to understand and trace AI outputs to their sources, and for users and rightsholders to understand how AI models were trained. Given that AI technologies are being integrated into applications that will impact the lives and well-being of individuals, it is crucial for AI technologies to be audited and required to maintain transparent records as to (a) the materials used to train the AI technology; (b) whether the material is copyright protected, and if so, whether the use of the content is licensed and from whom; and (c) the assessment and audit processes conducted to test the readiness of an AI system for deployment.

Requiring visibility into the inputs used to train an AI system would enable users and auditors to

better tackle bias, ascertain that a model was trained on information collected with the consent of those involved, ensure legal and regulatory compliance, support accuracy, and reduce the potential for erroneous output. Providers of AI systems should be required to support AI accountability throughout the value chain.

Wiley recognizes the importance of using high quality, peer reviewed, vetted material to create the training datasets for AI models. Accountability and transparency policies which provide assurances that high quality materials are used in training AI systems, without infringing on copyright or IP, builds confidence and trust in the technology and its outputs. We call on others to join in our efforts and invite the U.S. Government to advocate on accountability and transparency as a standard practice of business, particularly with respect to AI.

Data Provenance Explorer Platform

A collaborative effort involving researchers from MIT, Cohere for AI, and 11 other institutions has resulted in the launch of the Data Provenance Explorer platform. This free tool addresses the escalating data transparency crisis in the realm of AI by allowing the tracking and filtering of audited datasets for ethical, legal, and transparency considerations. The initiative, led by machine learning and legal experts, conducted the largest AI dataset audit to date, covering nearly 2,000 widely used fine-tuning datasets. These datasets, crucial for various NLP breakthroughs, now feature tags indicating original data sources, re-licensings, creators, and other data properties. The Data Provenance Explorer platform provides a practical and accessible means for developers, scholars, and journalists to explore the composition and data lineage of popular AI datasets, offering valuable insights into legal and ethical considerations surrounding AI data usage.

3. How can the intellectual property, privacy, and security of an AI system be effectively protected?

IP Protection

As a leading publisher, we are key providers of information and data on which AI is run. By validating, normalizing, tagging and enriching content, delivering material in robust, interoperable and globally consistent formats, and creating domain-specific ontologies, publishers ensure that information is a trustworthy high-quality input source with tremendous potential for use by AI systems across a broad range of applications. Wiley licenses databases and other content to AI developers on reasonable terms, providing access to valuable curated material on which to train trustworthy AI systems that yield verifiable and reliable outputs. However, generative AI models are harvesting copyright protected material for training purposes while disregarding the existing restrictions on that data and information. In addition, AI's potential to produce content closely resembling copyrighted material poses challenges for copyright enforcement, given the infringement ambiguities and increased difficulty of detection. Wiley remains concerned with the lack of oversight regarding the potential for unauthorized use of restricted content as an input for model training purposes (and for that information to be provided to others), as this will create significant implications for copyright and IP protection.

The U.S. Government should designate or establish an organization tasked with the centralized

oversight of issues related to AI. As part of this effort, the organization should be tasked with requiring developers of generative AI models to respect third-party IP rights, by requiring auditing mechanisms to verify the content input into these models are indeed authorized for use and ensuring application of appropriate penalties for non-compliance with IP laws. For example, the Artificial Intelligence Act proposed by the European Union would require developers of generative AI to obtain express consent to use copyright materials for training purposes and publish summaries of copyright materials used for the purpose of training AI language models. Similarly, the United Kingdom also emphasizes that the use of copyright works must be licensed for any training of AI models.

Furthermore, the U.S. Government should promote efforts that foster awareness of IP rights, particularly in the context of AI, through targeted education and engagement with both developers and the public. This dual-focused approach would equip individuals with the knowledge and tools to navigate critical legal frameworks responsibly, while fostering a culture of ethical innovation in the rapidly evolving technological landscape. These actions, among others, would also help to level the playing field with the technology sector and protect intellectual property rights critical to U.S. innovation. In the meantime, we will continue our efforts to establish guidelines, monitor potential violations, and provide licensing opportunities, including for use in connection with AI, in alignment with our commitment to protect our users' privacy and our authors' IP.

4. How effective are content authentication, provenance tracking, and synthetic content labeling and detection techniques? What are the economic and security implications of watermarking, provenance tracking, and other content authentication tools?

Content Integrity

Deficiencies in the accuracy and quality of factual information by various generative AI language models have the potential to threaten and infringe upon people's rights and safety. It should not be the role of an AI to say 'who is right' in an academic debate, but to provide information based on state-of-the-art research, based on licensed use of the Version of Record (VoR), and reflecting any corrections or retractions. The VoR provides transparent, linked, and up-to-date access to all associated research artifacts, which will ultimately validate the integrity of the information. The VoR also provides transparent access to all of the applicable publication ethics practices and standards. Those failing to ensure the authenticity of information with respect to both the inputs and outputs of AI models should be held to account. We are committed to providing access to the final, trusted VoR as the best way to accelerate open science, where applicable, as it pertains to AI.

Wiley continues to demonstrate our commitment to integrity of information through our ongoing efforts to prevent the publishing of harmful and factually incorrect research in institutionally recognized journals. We are ready and willing to work collaboratively to make this a reality using the systems we have built to support scientific collaboration, integrity, and the research enterprise.

"Paper-mills," which produce fraudulent and fabricated research under the guise of legitimacy, use AI to increase output of content that increasingly looks authentic. The quantity of fake papers from "paper-mills" is increasing, and AI's ability to rapidly produce content lacking peer-review could

exacerbate the spread of misinformation. Wiley, along with other publishers, is developing machine-learning and AI tools to support existing manuscript screening checks for text similarity and identification of discrepancies or similarities in images or statistical data that could indicate potential ethical or reproducibility problems. For instance, in collaboration with the International Association of Scientific, Technical, and Medical Publishers (STM), Wiley is helping to develop the Integrity Hub, which combines shared data and experiences and technological innovation to detect research integrity issues. The hub includes two tools working to combat the efforts of "paper-mills" that aim to take advantage of the publishing industry.

While there will always be a need for human oversight of automated systems, these tools and services are increasing in sophistication and are beginning to be applied at scale. Routine checks and tools enable publishers to identify patterns of potential systematic manipulation of the publication process, allowing for actions to correct and amend the scientific record, upholding trust and credibility of information. However, the stakes for ensuring content integrity have never been higher due to the rate at which AI can produce information. To support content integrity efforts, the U.S. Government should develop and deploy measures needed for the purpose of auditing the information produced by generative AI for accuracy and impartiality. Appropriate funding should be allocated for these measures, coupled with close collaboration with private institutions, including publishers and creators.

Application and Use Cases

As a leading publisher, we are key providers of information, materials, and data on which AI tools could be trained. By validating, normalizing, tagging and enriching content, delivering material in robust, interoperable and globally consistent formats, and creating domain-specific ontologies, publishers ensure that information is a trustworthy high-quality input source with tremendous potential for use by AI systems across a broad range of applications. Since the introduction of large language models and their rapid dissemination, we have been evaluating the potential applications of generative AI tools in scholarly publishing. We have tested a variety of commercial and publicly accessible tools for potential use cases related to authoring, submission and reviews, editing and production, publishing, and discovery and dissemination in support of mitigating the risks of AI. Based on this work, we've found that AI can potentially support:

- **Authoring** by helping evaluate writing quality and giving reasonable feedback; rewriting manuscripts with better sentence structure and vocabulary to improve readability; suggesting research topics; and producing initial drafts of plain language summaries for discoverability;

- **Submission and review** by helping an editorial assistant run initial screenings. However, there are some significant limitations;

- **Editing** by helping copy edit;

- **Publishing** by helping verify, enrich, classify, and translate content; and

- **Discovery and dissemination** by enhancing the quality of search results while also introducing new ways of discovering information.

Authorship

While generative AI has the potential to facilitate collaboration and improve the quality, reproducibility, and transparency of research work, its current propensity for inaccurate or biased results also introduces potential risks to research integrity. For this reason, accountability and transparency are central; only authors are accountable for their work, and any information or analysis generated by generative AI tools needs to be transparently described at the point of submission.

With respect to authorship, Wiley's policy is that generative AI tools cannot be considered capable of initiating an original piece of research without direction by human authors. Authors remain fully responsible for the accuracy of the information in their work, and use of AI tools must be disclosed and described, transparently and in detail, in the Methods or Acknowledgements section. Tools that are used to improve spelling, grammar, and general editing are not included in the scope of these guidelines. Our full policy is available on our website here: Best Practice Guidelines on Research Integrity and Publishing Ethics.

5. How can AI red-teaming complement other risk identification and evaluation techniques for AI models?

The potential misuse of scientific content, particularly in chemistry and molecular biology, is a critical concern that merits further discussion. High-quality scientific data, such as chemical reaction information or genetic sequences, could be exploited by malicious entities to create harmful substances like nerve agents or viruses. Prior to the public release of GPT-4, OpenAI conducted red teaming, including input from a chemist who successfully used the model to propose routes to a chemical weapon. Recent reports have highlighted instances where ChatGPT was connected to a robotic synthesis lab for real-world compound production. Scholarly publishers, like Wiley, disseminate extensive chemical knowledge with both positive and negative implications. The voluntary red-teaming by OpenAI prompts consideration of whether such assessments should be mandatory within a regulatory framework, potentially involving entities like NIST chemists to probe models for nefarious applications. It is crucial to recognize the broad scope of "nefarious use" in the vast fields of chemistry and molecular biology, where distinguishing between legitimate research and misuse is subjective and complex.

Striking a balance that prevents misuse without stifling legitimate innovation is a challenge that warrants careful consideration within the developing AI landscape. Adversarial attacks on LLMs have diverse motivations, ranging from manipulating models to reveal sensitive information, spreading harmful political messages, financial gain, and more. To enhance the security of language models, Wiley encourages the regular practice of data sanitization, adversarial training, input verification, threat modeling, updating models, limiting atypical inputs, employing multiple models, and most importantly, requiring human review.

6. How economically feasible is conducting AI red-teaming exercises for small and large organizations?

The complexity of the AI landscape necessitates a comprehensive and rigorous framework for the evaluation of AI products and services. When assessing economic feasibility, it is imperative to underscore the unique cost for each organization, considering the type of industry, structure, business model and a variety of other important factors. The economic feasibility between small and large organizations is a crucial part of the conversation, to ensure that AI governance efforts do not have adverse impacts on small and medium-sized enterprises. To that extent, it is important to recognize that the sheer size of an organization, small or large, does not guarantee that the costs associated with conducting AI red-teaming exercises will not have a significant impact. For example, many organizations will lack specialists with the technical expertise to conduct AI red-teaming exercises, and acquiring such talent will be expensive.

Wiley recognizes the importance of subjecting AI-related products and services to thorough testing and continued monitoring, as such measures are indispensable to uphold safety and integrity. By fostering an environment of continuous evaluation and refinement, we can collectively contribute to the responsible and effective integration of AI technologies into our society. We encourage the U.S. Government to dedicate federal funding to advance organizations' AI governance capabilities and to engage with a broad spectrum of diverse stakeholders on AI red-teaming exercises and other initiatives, to ensure that policy is effective, efficient, and precisely targeted.

7. What guidelines and standards are needed for trustworthiness, verification, and assurance of AI systems? Are there gaps in existing standards, norms, or practices for governing, mapping, measuring, and managing generative AI?

Standards and Best Practices

The establishment of standards and regulations for AI, nationally and internationally, is vital for both the protection of individuals and for the protection of organizations utilizing the technology. The cross-border nature of the digital economy makes it necessary for international AI regulatory frameworks and technical standards to apply between nations and regions. Until governmental action is taken, questions regarding compliance and best practices remain unanswered. However, any efforts to govern AI must avoid blanket regulation that applies to all AI generally, but rather establishes individual standards and regulations for each type of AI. These include, but are not limited to: Artificial Super Intelligence, Artificial General Intelligence, and Artificial Narrow Intelligence.

Policymakers should weigh aspects like fairness, safety, and accountability in AI and understand the tradeoffs of these factors, and allow for flexibility in adjusting rules specific to individual AI applications. Any executive or legislative action should also include language that allows for the application of existing and future laws to unforeseen developments in the technology within a reasonable manner of time. Any standards or best practices also should allow for future application to unforeseen developments in the technology. In doing so, there will be assurances that ongoing efforts will have a long-lasting impact on the protection of consumers and clarity on the obligations of private entities engaging in the development or use of AI.

Existing Gaps

Wiley remains concerned with the lack of accountability in the development of AI, particularly as it pertains to misrepresentation of authorship, the ingestion and utilization of retracted or flawed research papers, the automated mass production of derivative works from copyrighted content, large-scale plagiarism, academic misconduct and scientific fraud, repeated use of AI for watermark detection and removal, search result manipulation, content modification of copyrighted works using AI, and the creation of deepfakes. There have also been several reported instances of AI models leading users to known piracy platforms and shadow libraries, providing access to blocked online repositories, linking to torrent files of copyrighted works, and guiding users on how to find pirated content. AI models have also demonstrated an ability to generate specific pages, sentences, paragraphs, opening paragraphs, or chapters upon user prompts, and how prompts related to completing sentences, listing missing words, and combining character information with dialogue can result in verbatim copies of texts. These issues collectively highlight the potential misuse and ethical challenges associated with advanced technologies in the academic and content creation domains.

Furthermore, in an effort to promote the development of AI in a safe, responsible, and inclusive manner, there is a need for legal protection to shield private entities from the potential adverse consequences stemming from AI information sharing; underscoring the importance of safeguarding proprietary information, intellectual property, and ensuring data security amid the evolving landscape of artificial intelligence technologies.

8. What forms of transparency and documentation are helpful for various risk management purposes in the context of generative AI models?

Wiley supports authorized licensing of content to AI developers on reasonable terms, providing access to valuable curated material on which to train trustworthy AI systems that yield verifiable and reliable outputs. By contrast, we believe that generative AI models may be harvesting copyright protected material for training purposes while disregarding the existing intellectual property (including copyright), security, privacy and other restrictions on use of that data and information. Wiley acknowledges recent efforts of some AI developers to integrate policies and protective measures aimed at mitigating copyright infringement, such as the release of publicly accessible source code from AI developers to enable copyright holders to deter the extraction of proprietary data and information by large language models from their websites. While these good-faith efforts seek to reduce the impact of copyright infringement, they once more shift the burden onto copyright holders, requiring the rightsholder to conduct due diligence and be proactive in the pursuit of financial restitution through legal means. It is imperative that copyright protection be the affirmative duty of the provider to obtain proper rights for use of copyrighted materials before using them in large language models.

Although generative artificial intelligence represents a new technological frontier, it is important to underscore that the framework of copyright protection is well-established and applies in this context. In this context, AI developers should be held accountable for copyright infringements, in alignment with the longstanding legal precedents widely applied for decades.

AI developers should be required to rigorously assess the extent to which copyrighted materials are integrated into their datasets. In the event copyrighted materials are identified, AI developers should be required to obtain explicit rightsholder consent or expunge the information before incorporating the dataset as an input for the training of large language models. In the case of third-party organizations, their acquisition of datasets should strictly adhere to publicly available information that explicitly excludes copyrighted materials. In support of transparency, integrity, and protection of copyright, AI developers should also be required to publicly disclose, in an easily accessible format that collectively retains new and previous information, the origin of materials by which large language models have been trained and confirmation that the information generated by outputs is accurate and up to date. These disclosures should also include the source of the materials, the identification of applicable rightsholders, note of any existing licenses permitting use, and the date on which the information was collected. For circumstances in which copyright infringement has occurred, AI developers should be required to notify the rightsholder immediately and disclose the extent to which the copyrighted information was disseminated to unauthorized parties

9. What mechanisms, venues, and partners are effective for promoting international collaboration and information sharing on standards development? What strategies drive the adoption and implementation of AI-related international standards?

Public-Private Engagement

The global nature of today's technology ecosystem demands a coordinated policy response. The establishment of standards for AI, nationally and internationally, is vital for both the protection of individuals and for the protection of organizations using the technology. The cross-border nature of the digital economy makes it necessary for international AI regulatory frameworks and technical standards to apply between nations and regions. Wiley recognizes that federal funding for R&D is essential to sparking innovation. Congress and the Administration should work together to develop and fund AI R&D

The United States should also work with key domestic and international partners to develop a shared vision for a risk-based regulatory approach for addressing AI challenges and advancing norms around responsible AI governance. We support recent efforts to establish shared resources for advanced AI research through the Executive Order on Artificial Intelligence, which offers a path for leveraging the unique capabilities of the public, private, and academic sectors. By providing AI researchers with open access to computational resources and high-quality data, we have the potential to democratize and enhance America's AI capabilities.

We also support NIST's efforts to implement the AI Risk Management Framework, which will enhance organizational AI governance. We also support efforts to develop standardized testing frameworks and benchmarks to evaluate the performance of AI systems.

Promoting Digital Skills

The future success of AI depends on a foundation of understanding between the user and the product. Today, questions remain over the applications of AI and how language models are

collecting, analyzing, and storing data provided by users. Wiley, in collaboration with the U.S. Department of Labor and the Business Higher Education Forum, was the former Co-Chair of the Asia-Pacific Economic Cooperation (APEC) Closing the Digital Skills Gap Forum. Through this work, the 21 APEC member economies have created the APEC Roadmap to Closing the Digital Skills Gap by 2030, which incorporates AI as an area of focus. In support of this effort, we have helped to develop the APEC Digital Resilience Worker Readiness Checklist, which focuses on the following six pillars:

1. **Infrastructure:** providing access to broadband and mobile Internet and distributing Internet-enabled devices to low-income students and educational institutions;

2. **Availability of Learning and Training:** allocating resources to higher education and digital skills curriculum, sponsoring apprenticeships at the employer level, and prioritizing the development of a digitally skilled workforce in sectors beyond information technology;

3. **Skills and Pedagogic Models:** establishing economy-wide definitions related to digital skills, determining occupations where proficiency in digital skills is crucial, and supporting diagnostic tools that evaluate the digital fitness of the economy;

4. **Industry and Partnerships:** collaborating with the private sector to address common issues around digital resilience, creating awareness campaigns focused on technical and vocational education, and developing responsible business practices and initiatives that support digital skills advancement;

5. **Perceptions of Individual Workers and Learners:** preparing individuals for the digital skills future through employer- and academia-provided trainings and tools, and implementing efforts to reduce competition barriers in the digital skills space; and

6. **Resources:** leveraging existing resources from governmental, non-governmental, international, and private sector organizations.

Economies that utilize AI could see significant growth, and promoting digital skills requires multi-sectoral collaborations, including government, private sectors, and academic institutions. We encourage the United States, in collaboration with other APEC economies and partners, to take the necessary steps outlined by the Digital Resilience Worker Readiness Checklist to create an environment in which individuals have access to the necessary information, tools, and resources to successfully leverage AI systems in their professional, personal, and civic lives.

Concluding Thoughts

Wiley is committed to a future in which research on the development and use of AI is inclusive. Ultimately, our mission is to serve researchers, learners, and professionals. We must ensure that under no circumstances will people be put at risk, or that the quality of the works we publish and the valuable services that journals and societies provide to communities be compromised. To do so, the protection of intellectual property as it applies to AI language models is paramount.

As with any new technology, we must be both visionary and vigilant. We look forward to working with the National Institute of Standards and Technology and the wider scientific community on these issues and are committed to working collaboratively to develop forward-looking partnerships that strengthen research and innovation. In support of this endeavor, we have also provided a response to the White House Office of Science and Technology Policy's Request for Information on National Priorities for Artificial Intelligence. The stakes for content integrity have never been higher, and we must leverage the entrepreneurial spirit of the research community and private sector to enable our country's continued leadership in the scientific enterprise while mitigating the risks of artificial intelligence.

Sincerely,

Deirdre Silver
Executive Vice President, General Counsel
Wiley