



CONSUMER PRODUCT SAFETY COMMISSION

CPSC Artificial Intelligence Forum

AGENCY: Consumer Product Safety Commission.

ACTION: Announcement of forum.

SUMMARY: Consumer Product Safety Commission (CPSC) staff is holding a forum on artificial intelligence (AI), and related technologies, such as Machine Learning (ML). CPSC staff invites interested parties to attend or participate in the AI forum via webinar.

DATES: The AI forum will take place from 9 a.m. to 4 p.m., Eastern Standard Time (EST) on Tuesday, March 2, 2021, via webinar. All attendees should pre-register for the webinar. Individuals interested in serving on panels or presenting information at the forum should register by January 15, 2020. All other individuals who wish to attend the forum should register by February 15, 2021.

ADDRESSES: The forum will be held via webinar. Attendance is free of charge. Persons interested in attending the forum should register online at:

<https://attendee.gotowebinar.com/register/4723099942466621456> and fill in the information.

After registering, you will receive a confirmation email containing information about joining the webinar. Persons interested in serving on a panel or presenting information should email ntaylor@cpsc.gov an abstract by January 4, 2021. Detailed instructions for the webinar participants and other interested parties will be made available on the CPSC website on the public calendar: <https://cpsc.gov/newsroom/public-calendar>.

FOR FURTHER INFORMATION CONTACT: Nevin Taylor, Chief Technologist, 4330 East West Highway, Bethesda, MD 20814; telephone: 301-509-0264; email: ntaylor@cpsc.gov.

SUPPLEMENTARY INFORMATION: CPSC staff is hosting an AI forum to collect information on the voluntary consensus standards, certification, and product specification efforts associated with products using AI, ML, and related technologies. The information collected

from the forum will assist staff in making recommendations for improving the safety of consumer products that include this technology.

I. BACKGROUND

For this Forum, we are generally defining “Artificial intelligence” (AI) as any method for programming computers or products to enable them to carry out tasks or behaviors that would require intelligence if performed by humans.¹ “Machine learning” (ML) is typically understood to be an iterative process of applying models or algorithms to data sets to learn and detect patterns and/or perform tasks, such as prediction or decision making that can approximate some aspects of intelligence.²

A. Potential Uses of AI ML in Consumer Products to Improve Product Safety

CPSC staff is aware of consumer products with claims of AI inclusion. Children’s toys, residential appliances, and recreational products are being marketed touting the use of AI, ML, and related technologies to improve product efficacy and consumer experience. Although opportunities exist for manufacturers to improve safety using new technologies, hazards may also be associated with the inclusion of these technologies.

B. AI, ML, and related technologies

AI, ML, and related technologies have the potential to dramatically change the nature of consumer products, with important ramifications for CPSC’s responsibilities to protect consumers from product hazards. In particular, products with AI or ML technologies would be learning from the consumer and from the operational environment for the product. Customization occurs through the evolution of products after delivery to the consumer, resulting in significant ramifications for manufacturer’s implementation of AI and ML that shape products and transform consumer experience. Although adapting to consumer preferences has the potential to make significant strides in product customization of features and safety

¹ <https://www.nap.edu/catalog/25021/the-frontiers-of-machine-learning-2017-raymond-and-beverly-sackler>.

² Ian Goodfellow Yoshua Bengio Aaron Courville, *Deep Learning (Adaptive Computation and Machine Learning series)*, (MIT Press, 2016), 1.

enhancements, using data to predict and enhance product operation could result in safety hazards.

C. Ramifications of AI and ML in Consumer Products

Manufacturers may not fully understand the operation of the AI-enabled products, particularly for those using genetic algorithms and other evolutionary AI techniques. Changes to the product after purchase may impede CPSC's ability to replicate reported hazards, creating challenges for compliance investigations and product safety standards development.

D. Relevant Voluntary Standards

Voluntary standards organizations are developing consensus standards related to AI and ML technologies that will likely inform and improve safety-related characteristics in consumer products. AI and ML standards in the automotive, aerospace, and defense industries are ongoing, and knowledge from these efforts may be valuable in consumer product safety standards development.

II FORUM TOPICS

The AI forum will discuss existing and proposed voluntary consensus standards, certifications, testing methods, product specifications, best practices, and similar guidance for AI, ML, and related technologies. There is currently considerable interest in exploring a variety of areas of AI and ML, including ethics, security, and privacy. However, given the CPSC mission, this forum is focused on obtaining information specific to assisting the agency's safety efforts with consumer products that use these technologies. CPSC staff is interested in discussing the best way to provide guidance to manufacturers and importers of consumer products with AI and ML, to test products for safety that address the following considerations:

- **IDENTIFICATION:**
 - Determine presence of AI and ML in consumer products.
 - Does the product have AI and ML components?
- **IMPLICATIONS:**
 - Differentiate what AI and ML functionality exists.

- What are the AI and ML capabilities?
- **IMPACT:**
 - Discern how AI and ML dependencies affect consumers.
 - Do AI and ML affect consumer product safety?
- **ITERATION:**
 - Distinguish when AI and ML, evolve and how this transformation changes outcomes.
 - When do products evolve/transform, and do the evolutions/transformations affect product safety?

III. FORUM DETAILS:

A. Forum Time and Place

CPSC staff will hold the forum from 9 a.m. to 4 p.m., EST on Tuesday, March 2, 2021, via webinar.

B. Forum Registration

If you would like to attend the AI Forum, but you do not wish to make a presentation or participate on a panel, please register online by February 15, 2021. (See the ADDRESSES portion of this document for the website link and instructions to register.)

If you would like to make a presentation at the AI Forum, or you wish to be considered as a panel member for a specific topic or topics, email an electronic version of your abstract to Nevin Taylor, ntaylor@cpsc.gov, by January 4, 2021. Abstracts should be relevant to the forum topic and no longer than two pages. Staff will select panelists and individuals to make presentations at the AI forum based on considerations such as: the submitted abstract information, the individual's demonstrated familiarity or expertise with the topic to be discussed, the practical utility of the information to be presented, and the individual's viewpoint or ability to represent certain interests (*such as large manufacturers, small manufacturers, consumer advocates, and consumers*). Staff would like the presentations to represent and address a wide variety of stakeholders and interests. Staff will notify those who are selected to make a

presentation or participate in a panel by January 15, 2021, so that you can prepare and provide your final presentation by February 12, 2021.

Although staff will make an effort to accommodate all persons who wish to make a presentation, the time allotted for presentations will depend on the agenda and the number of persons who wish to speak on a given topic. Staff recommends that individuals and organizations with common interests consolidate or coordinate their presentations, and request time for a joint presentation. If you have any questions regarding participating in the forum, contact Nevin Taylor, ntaylor@cpsc.gov, 301-509-0264.

Alberta E. Mills, Secretary,

U.S. Consumer Product Safety Commission.

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