Europe Technology Policy Committee

21 November 2023

COMMENTS IN RESPONSE TO FIRST EDITION OF TTC WG1 EU-U.S. TERMINOLOGY AND TAXONOMY FOR ARTIFICIAL INTELLIGENCE

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ETPC welcomes the effort to establish common terminology and a taxonomy for Artificial Intelligence and offers the following concerns and recommendations in response to the 30 October 2023 call for input by the Technology Standards Working Group of the EU–US Trade and Technology Council:[1]

Page	Term	Analyses/Recommendations
4	**Autonomy**	Replace the phrase "a set of intelligence-based capabilities" with "a set of behavioural capabilities;" and End the second sentence with the phrase "self-directed behaviour (with the human's proxy for decisions) within contextual tolerance."
5	**Machine Learning**	There is no scientific consensus as to how humans learn. Thus, delete the phrase "imitating the way that humans learn."
5	**Natural Language Processing**	Clarify whether the definition concerns both the processing of natural language and the generation of natural language.
7	**Accuracy**	Rectify this definition's lack of precision by providing individual definitions of "true positive" and "false positive." Having done so, also add definitions for other key metrics, including (but not limited to) "recall," "precision," and "F measures."

[1] https://futurium.ec.europa.eu/en/EU-US-TTC/wg1/news/input-first-edition-ttc-wg1-eu-us-terminology-and-taxonomy-artificial-intelligence

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7	**Test**	Include evaluation of product behaviour in this definition, as well.
8	**Algorithm**	Broaden this definition to encompass the processes operative in deep learning systems, which may be concurrent rather than step-by-step. Further expand this definition to address the concept of "halting."
8	**Human Values for AI**	Revise this entry to be concrete and definitional rather than, as exemplified in the second and third paragraphs, abstract and aspirational. This is an important part of the taxonomy and we recognise that this is a difficult concept to define. We recommend addressing explicitly how human values can become embedded in AI, *whose* values should be taken into account, and by what means that may be accomplished.
9	**Human-Centric AI**	We recommend using the term "human-centered AI," which is the terminology used widely in the scientific and academic communities. We also note that the proposed definition uses vague terms, including "prioritise," "encourage," "empowerment," and "meaningful interaction.") In so doing, it fails to address important aspects of human behaviour. Accordingly, we urge that the proposed definition be replaced in its entirety by one that better and more completely reflects human experience, *e.g.*, "Human-centered AI systems work in partnership with human beings and enhance human capabilities rather than replace human intelligence."[2]
9	**Neural Network**	Delete the unneeded first sentence. Provide context for the current reference to the "connectionist model" and separately define it.
10	**Socio-Technical Systems**	Replace the present definition with one that captures the inherent and two-way relationship of technology and society rather than, as the proposed definition does, focus primarily on technology. Such a definition might profitably be guided by the following:

[2] Wendy E. Mackay, John Shawe-Taylor, and Frank van Harmelen. *Human-Centered Artificial Intelligence (Dagstuhl Seminar 22262).* In Dagstuhl Reports, Volume 12, Issue 6, pp. 112-117, Schloss Dagstuhl - Leibniz-Zentrum für Informatik (2023) [https://doi.org/10.4230/DagRep.12.6.112]. See also, the Hybrid Human-AI (HHAI) Conference series [https://hhai-conference.org/].

		"The concept of the socio-technical system was established to stress the reciprocal interrelationship between humans and machines and to foster the program of shaping both the technical and the social conditions of work, in such a way that efficiency and humanity would not contradict each other any longer."[3]
11	**Accessibility**	Clarify in this definition that some level of access is protected.
12	**Evasion**	Create separate definitions for key terms used, including "constrained optimisation" and "loss function."
12	**Opacity**	Add "the provenance of datasets" to current references to AI system processes, functions, output, and behaviour.

ETPC stands ready to further assist the Working Group. Should questions arise concerning this document, or to arrange a technical briefing with ACM and ETPC's expert members, please contact ACM's Technology Policy Office.

[3] Ropohl, Günter (1999). "Philosophy of Socio-Technical Systems". *Society for Philosophy and Technology Quarterly Electronic Journal*. **4** (3): 186–194. doi:10.5840/techne19994311