

: *What are the levels of decision automation?*

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Possibilities for decision automation (DA) have expanded and it is useful to classify applications in terms of a spectrum or a scale between completely automated decisions to no decision automation. Parasuraman et al. (2000) provides a starting point. At the highest level of decision automation, a DA system decides everything, acts autonomously, and uses no human assistance. Conceptually it is important to identify meaningful categories between the two extremes. Ideally the categories and levels of automation are understandable and at least one example exists that fits the category. For completeness, it may be useful to identify a category where no example yet exists.

Parasuraman et al. (2000) proposed "that automation can be applied to four broad classes of functions: 1) information acquisition; 2) information analysis; 3) decision and action selection; and 4) action implementation. Within each of these types, automation can be applied across a continuum of levels from low to high, i.e., from fully manual to fully automatic. A particular system can involve automation of all four types at different levels."

References

Parasuraman, R., T. Sheridan, and C. Wickens. (2000). A model for types and levels of human interaction with automation. *IEEE Trans. Syst. Man Cybern. Part A Syst. Hum.* 30(3), 286-297. *IEEE transactions on systems, man, and cybernetics. Part A, Systems and humans : a publication of the IEEE Systems, Man, and Cybernetics Society.* 30. 286-97. 10.1109/3468.844354.

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