

The Curiosity Checklist for Explainable AI

Users can be intrinsically motivated to make sense of their AI tool. The purpose of the Curiosity Checklist is to enable researchers to gain a quick look at why a user wants an explanation. The checklist is simple and easy-to-use in situations where the XAI system provides opportunities for users to ask for explanations. Using the Checklist, the user indicates why they want an explanation, and then is provided a "free response" option.

User's checklist responses can serve as parameters or constraints that the XAI system might use to generate explanations that are tailored to each user's explanation needs. XAI-generated explanations that are so tailored could potentially enhance the user's trust by satisfying their curiosity or resolving their uncertainty.

Users' free responses may be used in the following additional ways:

- To provide a window into the user's mental model, or its perceived insufficiencies.
- To provide a window into aspects of the AI system's operations that need more or better explaining.
- To reveal ways in which the AI's explanation method might suppress or inhibit curiosity, and
- To make it possible to use depth of curiosity (i.e., more triggers are checked) as an independent variable in research on human-XAI interaction.

The Curiosity Checklist was based on research and theory in the psychology of curiosity, especially the distinction between curiosity as a "desire to know" and curiosity as a "feeling of deprivation". A Technical Report on the Checklist is available upon request [rhoffman@ihmc.us]

Why have you asked for an explanation?

Write a check mark for check all of the reasons that apply.

Then please elaborate each of your responses by briefly answering the question that follows each checklist item.

___ I am curious — I want to know that I understand this AI system correctly.

What do you suspect might be wrong about your current understanding?

___ I feel uncertain — I want to understand what the AI will do next.

What do you think it will do next?

___ I am curious — I want to know why the AI did not make some other decision.

What do you think some other decision might have been?

___ I feel uncertain — What would the AI would have done if something had been different?

What do you think might have been different?

___ I am curious — I was surprised by the AI's actions and want to know what I missed.

What was it that the AI did that surprised you?