AI and Industry Standards: Evolution or Revolution?

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I've been seeing a lot of hype surrounding OpenAI's artificial intelligence chatbot ChatGPT-4 recently. Including acing standardized tests and writing college term papers in seconds. Each time I read about it, I wonder how it, or a future generation of artificial intelligence (AI), will be used in companies and particularly in my job. To answer my question there's no better place to go than to ask ChatGPT-4 itself.

The process to ask it questions is pretty simple. I went to openai.com, created a free account, and clicked through the terms, which importantly say OpenAI collects and stores all your input data—so it's a bad idea to have it analyze confidential or proprietary information. The home screen lists three limitations; one that it may occasionally generate incorrect information, two that it may occasionally produce harmful instructions or biased content, and three that it has limited knowledge of the world and events after 2021. And at the bottom of the home screen is a text box ready for input questions.

When I asked it:

How can artificial intelligence be used to write industry standards?

I got the response of:

AI as the potential to revolutionize the way industry standards are written and updated. AI systems can be used to analyze vast amounts of data, identify trends and patterns, and make recommendations for improving existing standards or creating new ones. Here are some ways in which AI can be used to write industry standards:

1. *Data analysis: AI can analyze large datasets to identify trends and patterns that may be relevant to the development of industry standards. For example, AI can be used to analyze accident reports, safety incidents, and other types of data to identify common causes of accidents or failures. This information can be used to develop new standards or update existing ones.*

2. *Natural language processing: AI can be used to analyze and interpret large volumes of text, such as technical reports, regulations, and industry standards. Natural language processing (NLP) algorithms can extract key concepts and ideas from the text, identify relationships between them, and summarize the information in a more digestible format. This can help industry experts review and update existing standards more efficiently.*

3. *Machine learning: Machine learning algorithms can be used to learn from existing standards and identify patterns that may be used to improve or create new standards. For example, a machine learning algorithm could analyze a large number of standards and identify common themes, such as specific design requirements or testing procedures. This information could then be used to develop new standards that are more comprehensive and effective.*

4. *Expert systems: Expert systems are AI programs that mimic the decision-making processes of human experts. They can be used to provide guidance and recommendations for developing industry standards based on best practices and existing regulations. Expert systems can also be used to identify potential conflicts or inconsistencies in standards, which can be addressed before they become problematic.*

5. *Automated documentation: AI can be used to automate the documentation of industry standards, which can save time and reduce errors. For example, AI algorithms could be used to automatically generate standard operating procedures or test protocols based on specific requirements. This would allow industry experts to focus on more complex tasks, such as reviewing and updating existing standards.*

In summary, AI has the potential to transform the way industry standards are written and updated. By using AI algorithms to analyze data, interpret text, learn from existing standards, and automate documentation, industry experts can develop more comprehensive and effective standards that are better suited to the needs of the industry. However, it is important to note that AI should be used as a tool to support human decision-making rather than replace it entirely.

It is definitely an interesting technology to watch, and I'm happy to see its last sentence says it doesn't plan to replace humans yet!

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