

Exploring the Challenges of Human-AI Teaming

The challenges of teaming between humans and artificial intelligence will be explored in a Wednesday afternoon I/ITSEC 2021 Focus Event: "Learning to Learn Together: How Will Human-AI Teams Achieve Mastery?" [Wednesday, 1 December 2021, 1600-1730, Room 330EF].

According to panel moderator Daniel Serfaty, Chairman and Chief Executive Officer, Aptima Inc., the panel will explore the question: How do we learn as human beings together with AI?

"This is not just a theoretical question," he asserted. "Because we continue to see this taking place more and more."

Serfaty referenced an I/ITSEC Special Event AI panel that he moderated two years ago, which included the "world's first" panel participation by an AI his company had designed named "Charlie," which answered questions and conversed with other panelists.

"When I was working with Charlie, I discovered that she took some time to adapt to me, in a sense that I learned to ask her questions to obtain interesting answers as opposed to dumb answers," he said. "And vice versa, by

AI systems to help our work, do we need to have a special kind of training for the human using them?

"That's because AI is not just a regular machine," he said. "This is a machine that learns and learns as it works with you. So, do I need special skills or training to work with that machine? That's the first big question. Are we entering an age where, because humans are going to work with AI, they need to develop new skills?"

Noting that some humans still attempt to anthropomorphize AI with human characteristics, he stressed, "They are not human. They think differently. They reason differently, not better or worse, but just differently. And we may need a certain kind of training to work with AI efficiently. And again, the same is true vice versa. The engineers who will design

brings a unique perspective."

Panelists include: Frederick Diedrich, Ph.D., Consultant; Greg Zacharias, Ph.D., Chief Scientist for Director of Operational Test and Evaluation, Office of the Secretary of Defense; and Michael Van Lent, Ph.D., President and Chief Executive Officer, Soar Technology Inc.

Asked about lessons and messages that he hopes the audience takes away from today's panel, he offered, "I want the audience to be developing a realistic but optimistic view of AI. It's not one extreme or the other. It's not that robots and AI are going to take over the world and, therefore, what do we have to do? I want to convince the audience that, for most systems in the foreseeable future, especially defense systems, the human is still in charge. And the optimistic part here is that, actually, by thoughtfully designing those AI systems, we can truly enhance the performance of the human."

He continued, "We can truly enhance the performance of human-commanded combat teams if we do things. One is that we make sure that the AI designer understands a thing or two about the human brain and the human intelligence and the human mind, which they are, as more and more of the new generation AI is actually designed with that. People call it empathy. I wouldn't go that far, but at least some kind of an internal model of the human."

"And the second big question is that, well, as a CEO, I know how to run my company or how to run a team as a leader. But what if one member of that team or worker was an AI? Do I have enough knowledge and training to actually manage that AI properly and to get the most performance out of it? That's a question. Who is going to provide that training, and what kind of new skills are necessary to acquire those competencies?" he asked.

Serfaty summarized, "I want my audience to understand that, basically, it's here. It's not the future. We're already dealing with those systems as we speak. Therefore, it's everybody's challenge."

He concluded, "This year's I/ITSEC theme is 'Innovating and Accelerating Training: Adapting to an Unexpected Future.' But these AI issues are neither unexpected nor the future. They are now."



learning about the kinds of questions and my own style of questioning, she was adapting and providing more interesting answers for the audience. And it took me a couple of days of rehearsal for that mutual adaptation to arrive at a point where I felt that I was working with her as a team."

He noted that that experience, as well as other similar AI experiences, have led people to wonder: As we introduce more and more

those AI have to take into account the humans that AI is going to support and augment to aid in their jobs."

He added that these sorts of issues are addressed in an emerging field of thought and engineering development dubbed "Human-Centered AI."

Serfaty highlighted the members of today's panel, observing, "They are experts who come at AI from different angles, and each