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Preparing for Our Future with Open Artificial Intelligence (AI): A Service Science Perspective

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This talk will present a service science perspective on how best to prepare for our future with open artificial intelligence. To frame this discussion, a somewhat novel introduction to the interconnected domains of knowledge science, service-dominant logic, computer science, artificial intelligence, open innovation will be offered. Service science aims to provide a transdisciplinary explanation of the evolving ecology of service systems entities and the value propositions that interconnect them, based on a service-dominant logic world view, in which service is the basis of all exchange and the primary motivation for interaction between entities. Service science can be thought of as the knowledge-base that allows entities to learn to play better and better win-win games over time. Service-dominant logic has defined service as the application of knowledge for the benefit of others. From a computer science perspective, artificial intelligence capabilities of entities can be viewed as the application of knowledge to perform a task as well as or better than a person. A timeline and roadmap will be presented for solving open source artificial intelligence (i.e., performance at about human-level on first narrow and then general tasks) for most tasks in our modern economies that are based on human knowledge and technical expertise. Much of the progress towards solving artificial intelligence is on full display on GitHub (open source code projects) and on AI and data science leaderboard challenge websites (e.g., Kaggle). Preparing for our future with open artificial intelligence will force a deeper examination of the rights and responsibilities of entities, their interactions and the outcomes of those interactions. Apps on smartphones will gain capabilities (e.g., voice interfaces, conversation interfaces, episodic memories, etc.) and transform into low-cost digital workers as Moore's Law continues. This will represent a miniaturization of the expertise economy of nations. As factories and farms also miniaturize, entities will have the opportunity to lower costs through AI-directed local material and energy flows. Individuals empowered by eventually hundreds of low-cost digital workers, as well as miniature factories and farms will enjoy "better building blocks" than any previous generation, as well as higher GDP (Gross Domestic Product) per employee, and higher quality of life as a result. However, this is not utopia, as new challenges will emerge, requiring new forms of governance to gain the benefits and avoid the risks of these advances. Open innovation challenges offer one such positive direction for entities, individuals, businesses, universities, and governments.

Speaker Bio:

Jim Spohrer directs IBM's open source Artificial Intelligence (AI) efforts. Previously at IBM, he led Global University Programs, co-founded Almaden Service Research, and was CTO Venture Capital Group. After his MIT BS in Physics, he developed speech recognition systems at Verbex, an Exxon company, before receiving his Yale PhD in Computer Science/Artificial Intelligence. In the 1990's, he attained Apple Computers' Distinguished Engineer Scientist and Technology title for next generation learning platforms. With over ninety publications and nine patents, he won the Gummesson Service Research award, Vargo and Lusch Service-Dominant Logic award, and a PICMET Fellow for advancing service science.

More information here:

Sample presentation: https://www.slideshare.net/spohrer/future-20171110-v14
Bio and CV: http://service-science.info/archives/2233