

MISQ Archivist

Coordinating Human and Machine Learning for Effective Organizational Learning

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Abstract

With the rise of machine learning (ML), humans are no longer the only ones capable of learning and contributing to an organization's stock of knowledge. We study how organizations can coordinate human learning and ML in order to learn effectively as a whole. Based on a series of agent-based simulations, we find that, first, ML can reduce an organization's demand for human explorative learning that is aimed at uncovering new ideas; second, adjustments to ML systems made by humans are largely beneficial, but this effect can diminish or even become harmful under certain conditions; and third, reliance on knowledge created by ML systems can facilitate organizational learning in turbulent environments, but this requires significant investments in the initial setup of these systems as well as adequately coordinating them with humans. These insights contribute to rethinking organizational learning in the presence of ML and can aid organizations in reallocating scarce resources to facilitate organizational learning in practice.

Keywords: Artificial intelligence, machine learning, human-machine coordination, organizational learning, simulation, agent-based modeling