## Neural Reshaping: The Plasticity of Human Brain and Artificial Intelligence in the Learning Process

Authors : Seyed-Ali Sadegh-Zadeh, Mahboobe Bahrami, Sahar Ahmadi, Seyed-Yaser Mousavi, Hamed Atashbar, Amir M. Hajiyavand

Abstract : This paper presents an investigation into the concept of neural reshaping, which is crucial for achieving strong artificial intelligence through the development of AI algorithms with very high plasticity. By examining the plasticity of both human and artificial neural networks, the study uncovers groundbreaking insights into how these systems adapt to new experiences and situations, ultimately highlighting the potential for creating advanced AI systems that closely mimic human intelligence. The uniqueness of this paper lies in its comprehensive analysis of the neural reshaping process in both human and artificial intelligence systems. This comparative approach enables a deeper understanding of the fundamental principles of neural plasticity, thus shedding light on the limitations and untapped potential of both human and AI learning capabilities. By emphasizing the importance of neural reshaping in the quest for strong AI, the study underscores the need for developing AI algorithms with exceptional adaptability and plasticity. The paper's findings have significant implications for the future of AI research and development. By identifying the core principles of neural reshaping, this research can guide the design of nextgeneration AI technologies that can enhance human and artificial intelligence alike. These advancements will be instrumental in creating a new era of AI systems with unparalleled capabilities, paving the way for improved decision-making, problemsolving, and overall cognitive performance. In conclusion, this paper makes a substantial contribution by investigating the concept of neural reshaping and its importance for achieving strong AI. Through its in-depth exploration of neural plasticity in both human and artificial neural networks, the study unveils vital insights that can inform the development of innovative AI technologies with high adaptability and potential for enhancing human and AI capabilities alike.

Keywords : neural plasticity, brain adaptation, artificial intelligence, learning, cognitive reshaping

**Conference Title :** ICAINN 2024 : International Conference on Artificial Intelligence and Neural Networks **Conference Location :** London, United Kingdom **Conference Dates :** April 11-12, 2024