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14. ABSTRACT
Automation employed in information fusion systems is designed to help humans combine information derived from multiple sources. The present study examined how information acquisition automation affects human pattern recognition needed to reach higher levels of information fusion. Results showed that when information acquisition was performed through manual operations, pattern recognition performance was similar for both perceptual and symbolic tasks. However, when information acquisition was automated, pattern recognition was better for the perceptual task than for the symbolic task. The results of this research can inform guidelines for the design of common workspaces to support human-machine teaming in future information fusion systems.

15. SUBJECT TERMS
Information Fusion, Human-Machine Teaming, Dual Processing of Human Cognition, Implicit Learning, Pattern Recognition

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