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Improvement of Perception through Task Executions

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Abstract

Good perception is indispensable to perform problem solving well. This is a common issue in cognitive psychology, but has been seldom studied in artificial intelligence. We formalize a perception scheme for an intelligent software using vector spaces. We also construct an experimental system for text documents and still images. Using the system for the texts, we conduct experiments in a context of information retrieval. The experiments using FAQ (Frequently Asked Questions) documents prove the method to be outperforming the conventional method. As for the system for the images, we extract common features out of a certain set of images in terms of Kansei engineering. The features explain characteristics of the images in intuitive manner. We aim to construct a decision support system, which cna analyze multimedia data from various viewpoints; however we will need to extend the method in various ways to achieve that.

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