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Author

Doing-Harris, Kristina

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An Innovation in the Integration of Cognitive Science and NLP: A Multi-level, Multi-path Approach

Kristina Doing-Harris

University of Utah, Salt Lake City, Utah, United States

Abstract: This paper is designed to advance a dialog about integrating cognitive science with current techniques in machine-based natural language processing. I address the issue of cognitive plausibility and present a multi-layer, multi-path approach to NLP. This approach is first explained as an abstraction with respect to neuroanatomy. It is then motivated and an explanation of its uniqueness is provided. Finally, examples of integrations between cognitive science and NLP with respect to the multi-layer, multi-path model are given. The examples are listed by the cognitive findings to which they refer. This approach demonstrates that NLP and Cognitive Science are not as incompatible as they may seem.