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Pozvánka

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na prednášku

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The mental representation of sentences: Tree structures or state vectors?

Abstract

There exist (at least) two broad classes of cognitive models of sentence processing: Grammar-based models, which represent sentences by tree structures, and connectionist models, which represent sentences by vectors in a high-dimensional state space. Arguments for and against each of these two conflicting views are mostly of a theoretical nature, or depend on some particular (psycho)linguistic phenomenon that one model supposedly accounts for better than the other. However, a thorough evaluation of the psychological validity of different models requires a quantitative comparison of their ability to account for empirical data. In this talk, I'll present results of a comparison between a Probabilistic Context-Free Grammar (PCFG; a standard tree-structure model) and a Simple Recurrent Network (SRN; the quintessential connectionist model). Although both models can predict experimentally obtained reading times, the SRN accounts for more of the data. Moreover, the PCFG does not supplement the SRN's predictions. These findings suggest that mental representations of sentences might be more like state vectors than like tree structures.

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web stránka:
`http://www2.fiit.stuba.sk/~kvasnicka/Seminar_of_AI`