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Research Summary 1

For this assignment I read *Efficient Inference and Structured Learning for Semantic Role Labeling*, written by Oscar Täckström, Kuzman Ganchev, and Dipanjan Das. This research paper describes a dynamic programming algorithm for constrained inference in semantic role labeling (SRL). The purpose of this paper is to show that their program operates much more efficiently than current ILP(integer linear programming)-based inference methods and other local counterparts. According to the data, it seems that for the most part, the dynamic program outperforms the local model.

Because I am currently taking CS 70, I was able to make sense of some of the more esoteric explanations in their research. I understood their use of conditional probability for frame identification, and how the dynamic program was encoded as a weighted lattice. I was also able to follow the inductive proof involving the lattice. What lost me wasn't the dense jargon, but the topic itself. I know very little about Natural Language Processing and more specifically, SRL. Although I understand the concepts from CS 70, I have never seen them used in a practical setting such as this, so I could read all the notation, but I had difficulty seeing how the equations relate to the situation. Oversights are hard to find without being able to put together all the information.