Patricia Fischer: Modeling compatibility in neural dependency parsing

Composition models of distributional semantics construct representations for phrases from distributional word representations. Such models can be used to compose any two words or phrases into larger phrases. In natural language, however, the set of words which can combine is limited. Compatibility models specify which words and phrases can be composed into grammatically and semantically correct phrases.

In more traditional analyses of dependency distributions, lexical preferences have been used to model compatibility. Bilexical preferences were shown to improve parsing results. Recent approaches to neural dependency parsing implicitly encode information about co-occurrences through vector representations of the token input. In my talk, I will show that lexical preferences also add information to neural dependency parsers.

For dependency parsing, parsing as a sequence labeling task has recently established a new state of the art. I will extend the analysis of lexical preferences to dependency parsing as sequence labeling by inspecting the ranking of attachment candidates in a sequence labeling model.