Semantic Transformation-based Error-driven Parser

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Abstract

In this paper, we present a semantic parser which transforms initial naive semantic hypothesis into correct semantics by using a ordered set of rules. These rules are learnt automatically from the training corpus with no linguistic knowledge.

1 Introduction

2 Related work

Subsection **??**).

3 Algorithm

To limit overfiting the training data, we prune the rules which are learnt at the end of the learning.

Although we use the

4 Discussion

The number of learnt rules is surprisingly small. As is shown in the figure **??**, learning curves for both training data and development data are very steep for both data corpora. Although our current strategy for choosing the final number of rules for decoding is to keep only the rules for which we obtain highest F-measure on the development data, we could use much less rules without scarifying accuracy. For example, we accepted 0.1% lower F-measure on the development data than we would need only YYY rules in comparison with XXX rules if select the number of rules based in the highest F-measure. In contrast, the initial lexicon the CCG parser (**?**) contains about 180 sometimes very complex entries for general English and yet additional lexical entries must be learnt.

Also, the number of rules per semantic concept (dialogue act or slot name) is very low. In TI data, we have XXX different dialogue acts and XXX slot and the average number of rules per semantic concept is XXX. In case of ATIS data, we have XXX dialogue acts and XXX slots and the average number of rules per semantic concept is XXX.

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