

COMP24412 Lab 3 - Grammars, Parsing and Logic

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0.1 Building a CFG

Steel is an alloy. Steel contains carbon.

POS tags:

- NNP: Proper noun, singular
 - steel
- VBZ: Verb, 3rd person singular present
 - is
 - contains
- NN: Noun, singular or mass
 - alloy
 - carbon
- DT: Determiner
 - an

Phrasal nodes: Steel, an alloy (alloy), carbon. CFG for the sentence:

- $s \rightarrow np\ vp$
- $np \rightarrow n$
- $vp \rightarrow v\ det\ n$
- $vp \rightarrow v\ n$
- $det \rightarrow an$
- $v \rightarrow is$
- $v \rightarrow contains$
- $n \rightarrow Steel$
- $n \rightarrow alloy$
- $n \rightarrow carbon$

0.2 Building a CFG in Prolog: using difference lists, and DFGs

To enumerate all the words, I ran the prolog query `sentence(X,[])`. See Prolog programs in the footnote for this page.