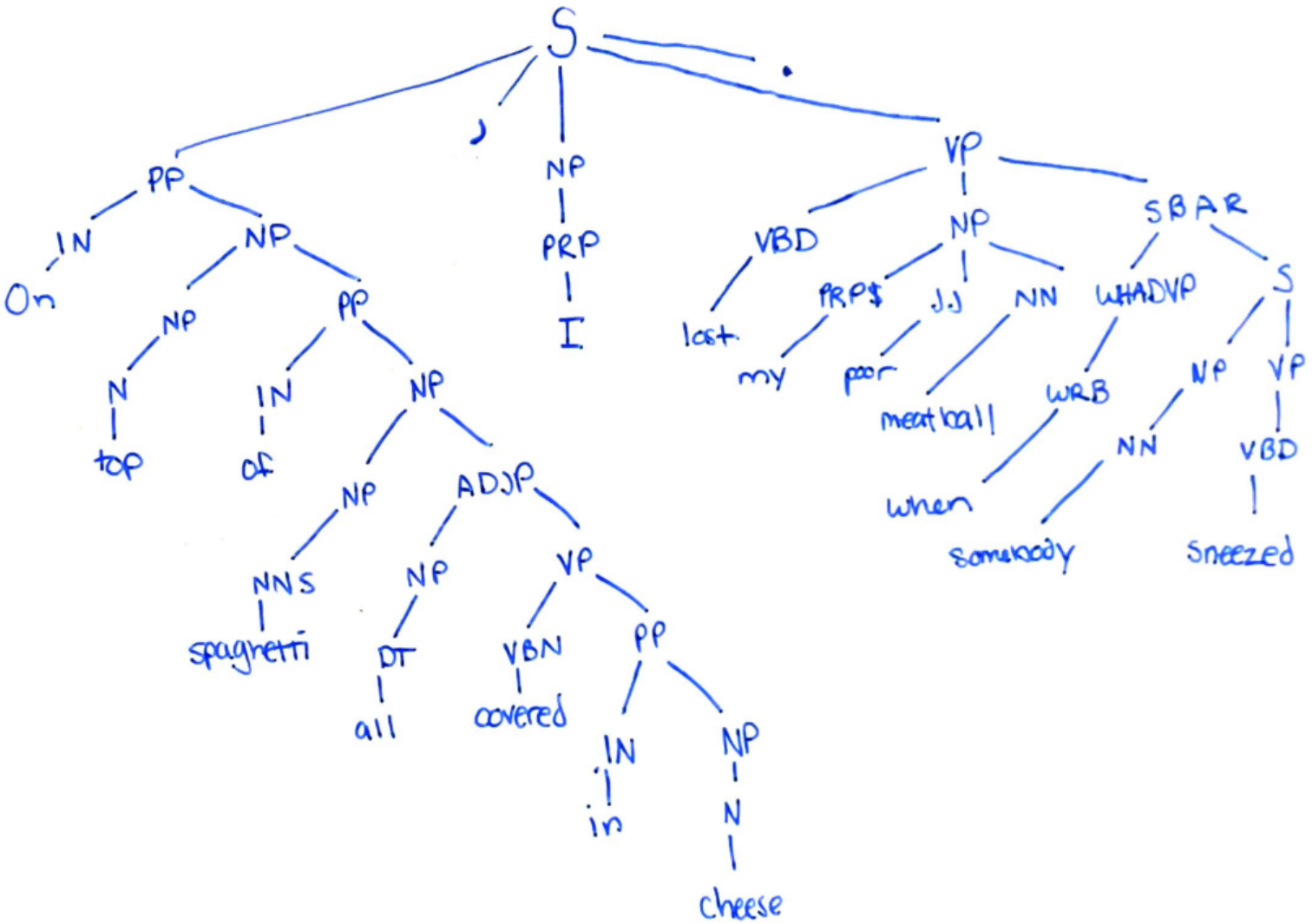
Sentence:

*On top of spaghetti all covered with cheese, I lost my poor meatball when somebody sneezed.*

# PSG

## Graph:

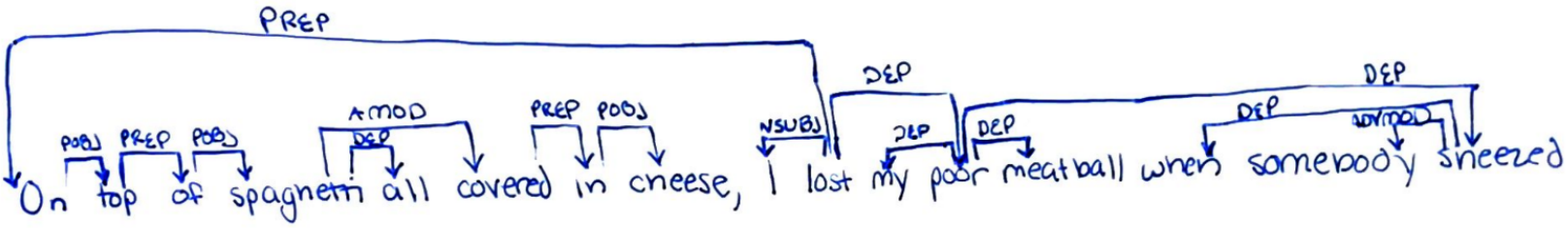


## Term Definitions:

- Clause Level
  - S: Simple declarative clause, basic sentence
  - SBAR: Sentence introduced by a conjunction
- Phrase Level
  - PP: Phrase beginning with a preposition
  - NP: Subject portion of a clause
  - VP: Predicate portion of a clause
  - ADJP: Phrase beginning with an adjective
  - WHADVP: Phrase beginning with “wh” adverb

# Dependency

## Parse:




## Relation Definitions:

- ROOT: Node that all others are dependent on
- DEP: Generic relation used when unable to specify more
- PREP: Modifier that is a preposition
- POBJ: Object of preposition
- AMOD: Modifier that is an adjective
- NSUBJ: Subject of the sentence
- ADVMOD: Modifier for adverb clause

# SRL

## Parse:

- Predicate 1:
  - Verb: covered
  - ARG1: spaghetti
  - ARG2: in cheese
  - ARGM-ADV: all

- Predicate 2:
  - Verb: lost
  - ARG0: I
  - ARG1: my poor meatball
  - ARGM-ADV: On top of spaghetti all covered in cheese
  - ARGM-TMP: when somebody sneezed

- Predicate 3:
  - Verb: sneezed
  - ARG0: somebody
  - ARGM-TMP: when

## Relation Definitions:

- Arguments:
  - ARG0: Agent of sentence doing the action
  - ARG1: Agent that is a passive participant
  - ARG2: Agent that acts as a kind of tool or state
- Modifiers:
  - ARGM-ADV: Modifies the entire sentence, set a tone
  - ARGM-TMP: Modifier that describes when something took place

# Summary

Parsing text can be challenging because of the ambiguity of language. PSG parsers, Dependency parsers, and SRL parsers work with text in different ways addressing three different types of language ambiguity. PSG parsers break a text up into a hierarchy of phrases. It speaks to the structure, or syntax, of a sentence. Though a PSG parser needs to be trained on a lot of related data, they are great when used as an initial step for things like classification once trained. Dependency parsers give a look at the relation of words in a sentence. They create a Directed Acyclic Graph of all the words in a sentence and use the main predicate as a root. These are good because they explicitly state the subject and give a deeper understanding

of verb phrases. Lastly, SRL parsers give insight into the meaning of a sentence. They look at who did what and to whom. SRL parsers are useful for logical inference. Because language is confusing, it is important to have parsers that are able to break it up differently to serve different purposes. The three parsers explored in this document approach the problem of language ambiguity in unique ways.