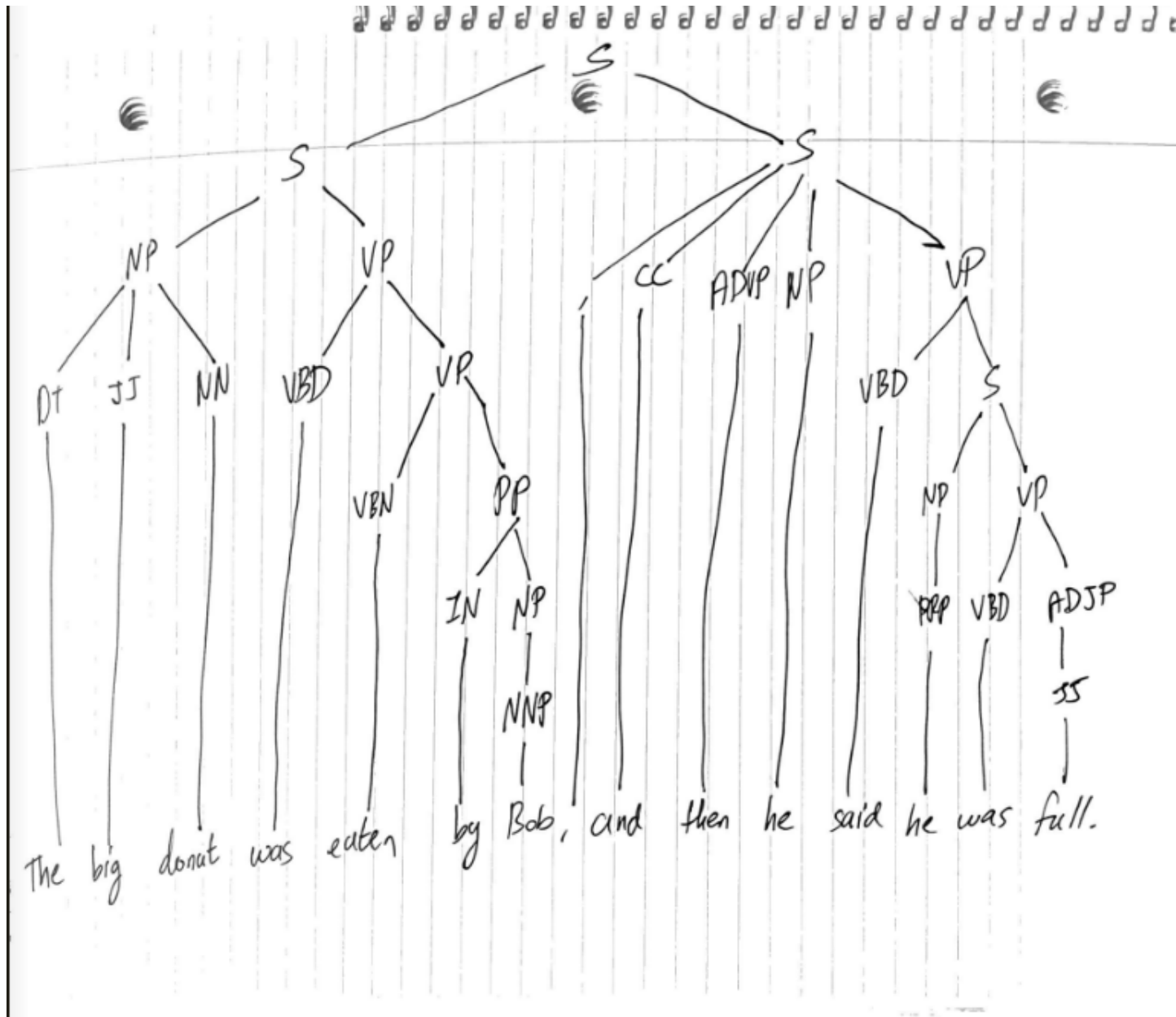Aditya Guin
CS 4395.001
10/16/2022

Portfolio Assignment: Syntax Parsing

Sentence: The big donut was eaten by Bob, and then he said he was full.
(Screenshots for a single problem may be split into multiple pictures for ease of
reading.)

PSG Tree:

S - simple declarative clause

CC - Coordinating conjunction

ADVP - Adverb Phrase.

VBD - Verb, past tense

NP - Noun Phrase.
DT - Determiner
JJ - Adjective
NN - Noun, singular or mass
VP - Verb Phrase.
VBD - Verb, past tense
VBN - Verb, past participle
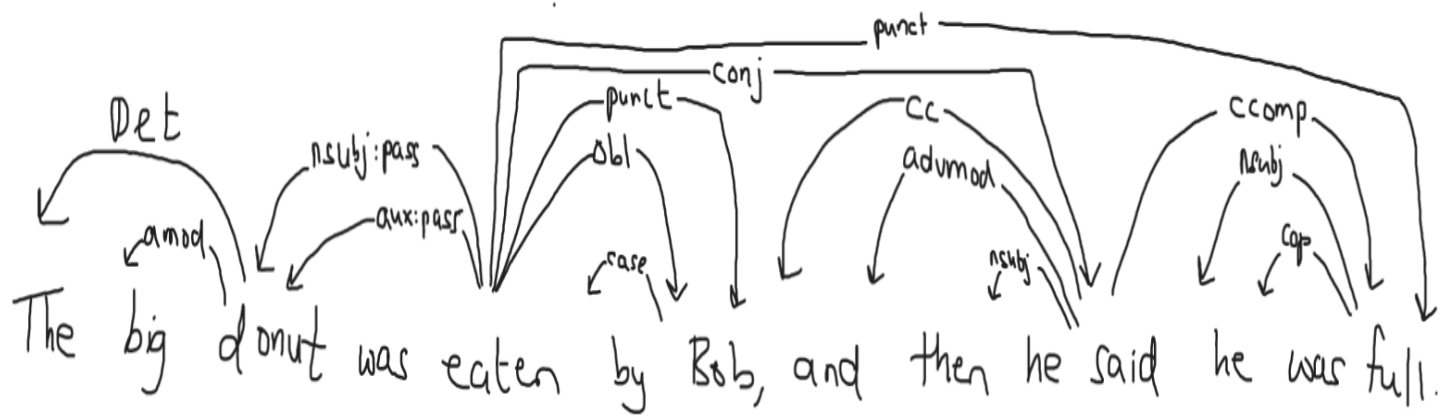
PP - Prepositional Phrase.

, -Comma

NNP - Proper noun, singular

IN - Preposition or subordinating conjunction

Dependency Parse:

SEE BELOW

The dependency parse of the sentence:

The big donut was eaten by Bob, and then he said he was full.

- Det → The
- amod → big
- nsubj:pass → donut
- aux:pass → was
- eaten (root)
- case → by
- obl → Bob
- punct → ,
- conj → said
- cc → and
- advmod → then
- nsubj → he
- ccomp → full
- nsubj → he
- cop → was
- punct → .

SEE BELOW

Det: determiner
A determiner is the relation between the head of an NP and its
determiner.

amod: adjectival modifier
An adjectival modifier of an NP is any adjectival phrase that serves
to modify the meaning of the NP

nsubjpass: passive nominal subject
A passive nominal subject is a noun phrase which is the syntactic subject of a
passive clause.

advmod: adverb modifier
An adverb modifier of a word is a (non-clausal) adverb or adverb-headed
phrase that serves to modify the meaning of the word.

ccomp: clausal complement
A clausal complement of a verb or adjective is a dependent clause with an internal
subject which functions like an object of the verb, or adjective

cc: coordination
A coordination is the relation between an element of a conjunct and the coordinating
conjunction word of
the conjunct.

case: case marking
The case relation is used for any case-marking element which is treated as a separate syntactic
word (including prepositions, postpositions, and clitic case markers).

auxpass: passive auxiliary
A passive auxiliary of a clause is a non-main verb of the clause which contains the
passive information

punct: punctuation
This is used for any piece of punctuation in a clause, if punctuation is being retained in the typed
dependencies. By default, punctuation is not retained in the output.

conj: conjunct
A conjunct is the relation between two elements connected by a coordinating conjunction, such as
"and", "or", etc. We treat conjunctions asymmetrically: The head of the relation is the first
conjunct and other conjunctions depend on it via the conj relation.

nsubj: nominal subject
A nominal subject is a noun phrase which is the syntactic subject of a clause. The governor of this relation
might not always be a verb: when the verb is a copular verb, the root of the clause is the complement of
the copular verb, which can be an adjective or noun.

cop: copula
A copula is the relation between the complement of a copular verb and the copular verb.

obl: oblique nominal
The obl relation is used for a nominal (noun, pronoun, noun phrase) functioning as a non-
core (oblique) argument or adjunct.

SRL Parse:

Sentence: The big donut was eaten by Bob, and he said he was full.

Frames for "was":

Verb: Action done in the sentence -
"was" is one verb

Frames for "eaten":

Arg0: Agent of the sentence - Bob in this phrase,
since he ate the donut

Arg1: Passive actor - The big donut in this phrase,
since it was eaten by Bob

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SEE BELOW

Frames for "said":

Argm-tmp: Modified Temporal - then in this phrase is the mt, since it signifies a time on when the action took place

The following applies for Frames for "said" and "was", the last verb

Arg0: the first "he" (definition given above)

V: "said"

Arg1: "he was full" (definition given above)

The PSG is beneficial since it shows you the POS for each word and breaks down the sentence into a hierarchy of phrases. If the task is classification, this is a useful first step. The downside would be that the tree can get quite big and complex for my sentence runtime can possibly be very high if more clauses were added. The dependency parser gives deeper information about verb phrases by identifying objects or dependent clauses. The downside for my sentence is that it may convey extraneous information that isn't required, though correct. SRL Parser is used for understanding the semantics and answers the question "who did what to whom". One downside for my sentence is that arg1 can include phrases from arg0 (he and he was full), which can cause some confusion