

COMP 6751 Natural Language Analysis

Quiz 2 working note

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1. Analyze the following sentence:

¹ The ² owner ³ of ⁴ an ⁵ alligator ⁶ that ⁷ went ⁸ viral ⁹ through ¹⁰ social ¹¹ media ¹² after ¹³ it ¹⁴ escaped ¹⁵ in ¹⁶ Villeray ¹⁷ last ¹⁸ December ¹⁹ has ²⁰ been ²¹ charged ²² , ²³ along ²⁴ with ²⁵ her ²⁶ partner ²⁷ , ²⁸ with ²⁹ criminal ³⁰ negligence ³¹ following ³² an ³³ incident ³⁴ in ³⁵ Ste-Julie ³⁶ this ³⁷ year ³⁸ . ³⁹

Answer:

The/DT owner/NN of/IN an/DT alligator/NN that/WDT went/VBD viral/JJ through/IN social/JJ media/NNS after/IN it/PRP escaped/VBD in/IN Villeray/NNP last/JJ December/NNP has/VBZ been/VBN charged/VBN ,/, along/IN with/IN her/PRP\$ partner/NN ,/, with/IN criminal/JJ negligence/NN following/VBG an/DT incident/NN in/IN Ste-Julie/NNP this/DT year/NN.

2. Using the positive numbers, indicate all the positions of the following constituents.

For instance, to indicate that *this year* is an ADVP, you would enter (36, 38).

a) NP

Answer:

- the owner (1, 3)
- an alligator (4, 5)
- social media (10, 12)
- an alligator that went viral through social media (4, 12)
- last December (17, 19)
- her partner (25, 27)
- criminal negligence (29, 31)
- an incident (32, 34)
- this year (36, 38)
- an incident in Ste-Julie this year (32, 38)

b) VP

Answer:

- went viral through social media (7, 12)
- escaped (14, 15)
- escaped in Villeray last December (14, 19)
- has been charged (19, 22)

c) RelCl (relative clause)

Answer:

- that went viral through social media after it escaped in Villeray last December (6, 19)

d) PP

Answer:

- of an alligator that went viral through social media after it escaped in Villeray last December (3, 19)
- through social media (9, 12)
- in Villeray (15, 17)
- along with her partner (23, 27)
- with her partner (24, 27)
- with criminal negligence (28, 31)
- following an incident in Ste-Julie this year (31, 38)
- in Ste-Julie (34, 36)

3. Let us indicate that *the* is governed by *owner* by the det dependency using the notation: ((2, 3) -det-> (1, 2))

Indicate all nsubj relations.

Answer:

- ((7, 8) -nsubj-> (6, 7))
- ((14, 15) -nsubj-> (13, 14))
- ((21, 22) -nsubj-> (2, 3))

4. In the style of Davidson, list all predicates (only the <PRED>(e) portion of the sentence meaning is required, so for the section (31, 39), the answer could be HAPPENING(e_{51})).

Answer:

$\exists e_1 \text{ HAPPENING}(e_1) \wedge \text{HAPPENER}(e_1, \text{"criminal negligence"}) \wedge \text{DESTINATION}(e_1, \text{"Ste-Julie"})$

5. Using the event variables you introduce above, add the temporal information for the event GOINGVIRAL(e_{33}) to your representation (for the event e_{51} , the answer would be IntervalOf(e_{51} , i) \wedge EndPoint(i, NOW) \wedge StartingPoint(i, LASTJANUARY)).

Answer:

$\exists e_{33} \text{ GOINGVIRAL}(e_{33}) \wedge \text{GOINGVIRALER}(e_{33}, \text{"alligator"}) \wedge \text{IntervalOf}(e_{33}, i) \wedge \text{EndPoint}(i, \text{NOW}) \wedge \text{StartingPoint}(i, \text{"Last December"})$