

Natural Language Understanding

Course 372.2.585 – 2022/2023

Exercise 1

Submission Date: 13.6.2023, 23:55

Question 1:

- a) Consider the following set of thematic roles together with their definitions:

Agent	Initiator of action, capable of volition
Patient	Affected by action, under-goes change of state
Theme	Entity moving, or being “located”
Beneficiary	For whose benefit action is performed
Experiencer	Perceives action but not in control
Instrument	Intermediary/means used to perform an action
Location	Place of an object or action
Source	Starting point
Goal	Ending point

Given this list, provide individual thematic roles for each span in brackets in the following sentences:

- i) [The ball] flew [into the outfield.]
 - ii) [Jim] gave [the book] [to the professor.]
 - iii) [Laura] talked [to the class] [about the bomb threats.]
 - iv) [Laura] scolded [the class.]
 - v) [Bill] cut [his hair] [with a razor.]
 - vi) [Gina] crashed [the car] [with a resounding boom.]
- b) Were the role definitions adequate? Would you add any roles? If so, what would they be?
- c) Use the Unified Verb Index (<https://verbs.colorado.edu/verb-index/index.php>) to find PropBank roles in sentences i) to vi) above (in Question 1a).
- d) Use the Unified Verb Index (<https://verbs.colorado.edu/verb-index/index.php>) to find FrameNet roles in sentences i) to vi) above (in Question 1a).

- e) Consider your annotations in c) and d). What pros and cons do you see with the different role sets?

Question 2: (See the file Ex1.ipynb)