Computational Linguistics

Summer 2021, IIIT Hyderabad

Assignment 2

Notes

The NER software used can be found <u>here</u>. The tagset includes persons (PERS), nationalities/religious or political groups (NORP), organisations (ORG), geopolitical entities (GPE) and locations (LOC).

Observations: Google Translation (Part 2)

Mistakes:

- 1. In one case, one whole clause was not translated. The sentence (1) was of the form "Q enn' P" where *enn'* is the quotative particle (equivalent to *ani* in Telugu), and only P was translated.
- 2. Two particularly long statements (6, 9, 13) were fragmented:
- (6) was converted to one grammatical sentence (without the complete meaning of the original) and two incomplete ones.
- (9) was almost correctly translated, but split into two sentences (the first of which is ungrammatical).
 - (13) was converted to one complete and one incomplete sentence.
- 3. There were occasionally issues in translating names of persons, especially those from outside Europe or with initials (1, 2, 7, 13, 15).
- 4. Numbers written using Malayalam numerals were translated improperly or not at all (11, 13, 15, 19).
- 5. The subject of the translation was in the dative case of the original and the meaning was inverted (12).
- 6. The verb in a verbless sentence (15), of the same type as (2) [see point 1 below], was not inserted.

Correct translations:

- 1. A verb was correctly inserted in a verbless sentence. The sentence (2) was of the form "Victory for X, Y, Z" with no verb; the output was "X, Y, Z win".
- 2. Another case was of an adjective phrase being converted to an adverb phrase (4). "X, who is in a hospital, is ..." was converted to "X is ... in a hospital".
- 3. A sentence fragment was fully and correctly translated. The fragment (8) was an adverb clause captioning a picture.

Observations: NER (Part 3)

- 1. A place was mistakenly tagged as an organisation (4, 18). The reason is not clear.
- 2. The exact distinction between the GPE and LOC tags is not fully clear. Sentences (5).
- 3. A person was mistakenly tagged as organisation (6).
- 4. "LNG" (liquefied natural gas) was mistakenly tagged as an organisation (9). It could be because it was being used to refer to a type of bus. Further, one bus route was tagged as a person and the other as an organisation in the same sentence.

- 5. "Mobile Vaccination Unit" was tagged as a person (16). The reason is unclear.
- 6. The word "Executive", actually part of "Executive Chairman" was tagged as part of the organisation name it immediately followed (19).
- 7. A person was mistakenly tagged as a geopolitical entity (20).

In general, the main problem appears to be with the identification of organisations. In many cases (1, 3, 4 and 6 above), the entity actually tagged as an organisation was in fact something else.

However, it must be noted that no non-named entities were mistaken as named entities.