

## Course Project Report

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**Instructions:** Read all the instructions below carefully before you start working on the report, and before you make a submission.

- Please typeset your submissions in  $\text{\LaTeX}$ . Use the template provided for your answers. Please include your name and Roll number with submission.
- This report is due on 27 April at 11:55 PM.
- No extensions will be given for the submission under any circumstances.
- Submissions via any other method other than Moodle submission will be deemed invalid.
- Plagiarism of any sort will not be tolerated. Strict action will be taken for those caught in plagiarism.

## 1 Tags

Discuss the different kind of tags in **both** UD and AnnCorra occurring in your chosen Indian language.

### 1.1 UD

You can do this either in tabular form or in a list form. An example of a table is:

<i>Tag</i>	<i>Examples</i>	<i>Linguistic Cues</i>
k1	<ul style="list-style-type: none"> <li>• Multiple Example 1</li> <li>• Multiple Example 2</li> </ul>	<ul style="list-style-type: none"> <li>• Multiple Cue 1</li> <li>• Multiple Cue 2</li> </ul>
k2	Single Examples	<ul style="list-style-type: none"> <li>• Multiple Cue 1</li> <li>• Multiple Cue 2</li> </ul>
k3	<ul style="list-style-type: none"> <li>• Multiple Example 1</li> <li>• Multiple Example 2</li> </ul>	Single Cue 1
k4	Single Example 1	Single Cue 1

Table 1: Discussion on UD tags

If you do not want to write it in a tabular form, write a list of all the tags with their examples and linguistic cues.

(a) k1: example1, example 2. Cue 1, Cue 2.

(b) ...

### 1.2 AnnCorra

Do the same for AnnCorra.

## 2 Linguistic Challenges with Annotation

- (a) Differential Object marking
- (b) Non-Nominative Subjects
- (c) Complex Predicates
- (d) Non-finite clauses: Conditional, Concessive, Relative, participial clauses
- (e) Ambiguity (Coordination, Attachment)
- (f) Ellipsis
- (g) Non-projectivity Ex 1: I saw a man yesterday who was singing Ex 2: A hearing is scheduled on the issue today Ex 3: To his wife, John gave a fantastic gift Ex 4: Which house, John bought?
- (h) Particles

## 3 Tag Statistics

### 3.1 Tag and Markers

For each tag, indicate the markers used to identify that tag and the number of tokens identified by each marker. Example:

There are a total of 100 *k1* tags. *k1* comes with the markers 0, *-ne*. 0 marker is responsible for 56 of the cases and *-ne* is responsible for the remaining 44.

### 3.2 Markers and Tag

For each marker, indicate the types of tags given to it and the number of cases for each tag. Example:

There are a total of 100 tokens with *-ne* marker. These tokens are marked with *k1*, *k2*. *k1* marker is responsible for 32 of the cases and *k2* is responsible for the remaining 68.

### 3.3 N-gram of tags

Include statistics about the frequency of n-gram of tags. Take *n* in the range [2,4].

**NOTE: You have to do the above 3 exercises for both UD and AnnCorra. This analysis has to be done on the training set given for both the types of tagging in Assignment 4.**

## 4 Error Analysis for automatic tagging

In this section, describe the errors in the output of your model trained in Assignment 4 on the test data. Give possible solutions, if any, to mitigate these errors in the future.

## 5 Discussion

### 5.1 Comparison of UD and AnnCorra

### 5.2 Need for new tags

#### 5.2.1 Intra-Chunk

propose any new intra-chunk tags you can think of with examples

#### 5.2.2 Inter-Chunk

propose any new inter-chunk tags you can think of with examples.