

MAIN GOALS

- a) Develop Tools for automatic poetry analysis, largely based on Natural Language Processing.
- b) Carry out the detection of literary phenomena relied on linguistic characteristics.

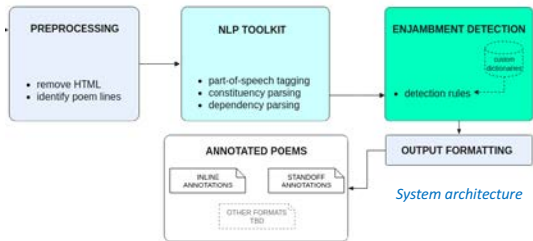
What has it been already done?

- Content analysis (NERC
Medieval Spanish Named Entity Recognition)
- Stylistic traits detection
Enjambment detection

ANJA

Automatic eNjambment Analysis in Spanish

- Detection of mismatch between metrical and syntactic units
- Defined in syntactic terms
- Detection based on pos-tagging / parsing
- Previously unanalyzed with automatic means



Output formats

- Standoff (type of enjambment and line)
- Inline (grammar tag and type of enjambment per line).

NLP Annotations

- PosTags tab (grammar tags)
- FullNLP tab (full pipeline)

#	Text	Position	Enjambment Type
1	([ra A] [se Q] [coran V] [las D] [hojas N] [C] [ra A] [las D] [barros N]	8	ex_suj_verb
2	([son V] [ic D] [mejor Q] [del F] [da N]	1	ex_suj_verb
3	([bajo F] [su D] [luz N] [madura G] [de P] [bosquejo N] [C]	0	
4	([ra A] [comienza V] [de D] [curso N] [C]	0	
5	([aprender V] [C] [enseñar V] [C] [lecciones N] [C] [aulas N] [C]	0	
6	([siempre A] [en F] [octubre C] [comenzaba V] [de D] [año N] [C]	0	
7	([C] [v C] [cuántas Q] [veces N] [esa D] [luz N] [de P] [estollo N]	0	

Results

- Two different corpus: ss. XV-XIX and s. XX

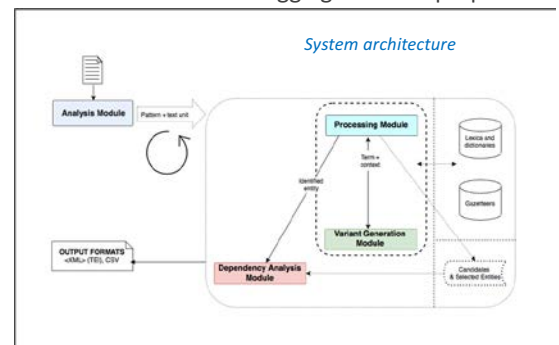
		N	P	R	F1
20 th	untyped	277	84.19	88.45	86.27
	typed	277	78.50	83.03	80.70

		N	P	R	F1
Dia-chronic	untyped	260	74.18	87.64	80.35
	typed	260	61.24	72.31	66.31

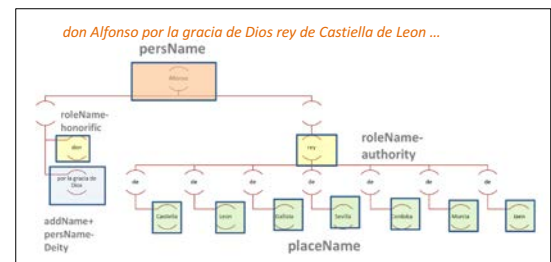
HisMeTag

Hispanic Medieval Tagging

- Named Entities Recognition in Medieval Spanish texts
- NLP techniques for linguistic processing
- Normalization of historical spelling and variant generation
- Automatic Detected Names Tagging and New proposed names



Dependence analysis



Output Formats

- TEI tagged Output



```
<persName>
  <roleName type="honoric">Don</roleName>
  Alfonso
  <roleName>
    <addName type="legitimacy">por la gracia de
      <persName role="_deity">Dios</persName>
    </addName>
    rey de
    <placeName>Castiella</placeName> de
    <placeName>Toledo</placeName> de
    <placeName>Leon</placeName> de
    <placeName>Gallizia</placeName> de
    <placeName>Seuilla</placeName> de
    <placeName>Cordoua</placeName> de
    <placeName>Murcia</placeName> e de
    <placeName>Jaen</placeName>
  </roleName>
</persName>
```

- Geolocation



Results

Entity type	Precision	Recall	F1
overall	0.83	0.72	0.77
placeName	0.78	0.73	0.75
persName	0.84	0.79	0.81
orgName	0.93	0.81	0.87
roleName	0.87	0.65	0.74

Period (years)	F1
1150-1200	0.85
1200-1250	0.73
1250-1300	0.89
1300-1350	0.76
1350-1370	0.63
1400-1500	0.67

