

# Universal Dependencies syntactic analysis of relations in medical texts

**Proposer(s) / Proposatzailea(k): Koldo Gojenola / Aitziber Atutxa**

**Contact / Kontaktua:** koldo.gojenola@ehu.eus

## Description / Deskribapena

The main idea is to characterize the syntactic structures used in relations in medical texts in Spanish. The relations could be of several types:

- Location: **rotura** en la “**rodilla derecha**”
- Modifier: **afasia severa**, **diabetes mellitus** en **grado II**
- Caused\_By: el **tramadol** le causó **hipoglucemia**
- Treatment:
  - Se le administró **digoxina** para tratar la **arritmia**
  - ... **Liraglutida** ... para el tratamiento de la **diabetes mellitus tipo II** ...

## Goals / Helburuak

To obtain a syntactic and semantic characterization of the relations among medical entities found on medical documents, to be used in a future automatic tool.

## Requirements / Betebeharrak

Example of a sentence:

*Liraglutida es un agonista del receptor de GLP-1 aprobado para el tratamiento de la diabetes mellitus tipo 2 (DM2), que mejora el control glucémico con bajo riesgo de hipoglucemias*

There is a corpus of manually annotated sentences which contain a set of medical entities and relations among them, which will be the basis of this study.

The student will be in charge of examining, finding and characterizing the syntactic and semantic patterns associated to each type of relation (see tree at the end of this document).

## Framework / Esparrua

Syntactic analysis using Universal Dependencies (UDPipe <http://lindat.mff.cuni.cz/services/udpipe/>).

## Tasks and plan / Atazak eta plana

1. Get the corpus. Specification of the problem
2. Syntactic analysis
3. Characterization of the patterns: syntactic and semantic
4. Discussion

