

Linguistic Resources for Natural Language Processing 2024/2025 (LR4NLP
24/25)

Project Work - Prof. Viviana Patti

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Development of annotated corpora and analysis
Instructions

The evaluation for the second part of the course will consist in a **Project Work** on the development of annotated corpora and analysis, and in the **delivery of a report** about this project work, which will be discussed and **presented with the support of slides during the exam session (30 minutes max: consider approximately 20 min for presentation + 10 for questions; in case of groups including 5/6 peoples the presentation can be a bit longer in order to give to all participants the possibility to talk).**

1) **Choose one of the two annotation labs introduced during the VP lessons:**

- a) Annotation Lab.1: **Annotating a Social Media Corpus (Tweets) with Hate Speech, Stance and Irony (PW1)**
- a) Annotation Lab 2: **Recognizing Cancellng Attitudes: An annotation task (PW2)**

2) Follow the instructions below.

IMPORTANT: as outcome of the lab work done during classes, ALL STUDENTS must complete

- the annotation of 25 tweets according to the schema presented in **PW1**, even if they choose to present a detailed report to be discussed during the exam about **PW2** (see details below marked as **ALL STUDENTS**).
- the annotation of the posts that has been assigned to them (**PW2**), even if they choose to present a detailed report to be discussed during the exam about **PW1**.

Instructions for Annotation Lab. 1:

Annotating a Social Media Corpus (Tweets) with Hate Speech, Stance and Irony (PW1)

ALL STUDENTS

Each student of the course, regardless of the lab they choose for the report to discuss during the exam, is asked to complete the **annotation for hate speech, stance and irony of 25 tweets** among those that has been assigned to them during the classes.

Annotation task

STUDENTS choosing PW1 as project work for the exam

Each student is asked to **complete** the annotation project of a corpus of at least **100 tweets** using the online platform you have already tested. To access your annotation sessions you will need to use the link sent to you in the email. The chosen annotation scheme is a multi-layer scheme that requires the following phenomena to be annotated on the same tweet:

- **Stance of the author of the tweet towards the phenomenon of immigration :**
 - Labels: *favore (in favour) /contro (against) /neutro (neutral)*
- **Hate speech against immigrants** expressed in the tweet
 - Labels: *presente (the tweet is hateful) /non presente (the tweet is not hateful)*
- **Irony** expressed in the tweet
 - Label: *presente (the tweet is ironic) /non presente (the tweet is not ironic)*

While the annotation process must be completed individually by each student, the result of the process must be **discussed and analyzed by groups of four/six people and reported in a written report** to be delivered to the teacher according to the times and methods specified below.

Before starting the annotation process, each student is required to fill out a survey (Form 1) aimed at collecting your characteristics as an annotator. Then another form (Form 2) will be filled to communicate group compositions. Details follow.

Setting of the annotation process and access to the annotation platform:

Annotator profile and access to the platform

It is assumed that you have filled out the form "**Annotator profile**" (<https://forms.gle/cbevUhtaQycTTGhLA>) as part of the activity of Lesson 11 VP, to characterize your annotator profile from the point of view of background and demographics and to get access to the **annotation platform**:

<http://annotazione.di.unito.it/>

IMPORTANT: use institutional email addresses.

Slides:

https://docs.google.com/presentation/d/13PUgx9Z97-4G39V4vxZ_OL3xXABs9ZIWADaeFdbAs1U/edit?usp=sharing , slides 31-33.

Groups

You are requested to create a group of at least four people (4/6 is the recommendation), possibly composed of individuals with diverse profiles, representative of different perspectives in terms of gender, use of social media (too social vs little social), origin (big cities vs small towns), typology of high school attended (humanities vs STEM).

Fill the form: "**Composition of groups of annotators**":

<https://forms.gle/3C5utmMp8JmJuQVv9>

Complete this form to declare the composition of the groups in view of the delivery of the annotation exercise report for the final exam. Each group of students:

- 1) must choose a group name;
- 2) must designate a representative who is responsible for completing this form, general reporting, and uploading the group report for review;
- 3) must be composed of at least four different people (max six) with respect to the demographic trait chosen for this project work as a perspective to be analyzed.

IMPORTANT: when indicating group members, **use institutional email addresses** (the same used for form 1).

WARNING: if you have difficulty inserting yourself in a group, enter the name of the group '**open**', and your email address both as manager and as a member in the category of the chosen trait in which you identify. I will put you in a group after collecting all the questionnaires.

Content and delivery of project work reports

Contents of the report

At the end of the individual annotation process, each group will be able to view and export in csv format the result of the annotation of the 100 tweets by the four members of the group. For each tweet, three columns will therefore be visible for the three phenomena for each annotator.

Once the gold label has been calculated in the spreadsheet according to the so-called majority vote for the various annotated phenomena (where it emerges, as described above in point A) the report must include:

- Overview of annotation results: describing the data related to the annotation process, the profiles of the annotators (demography and background) and the trait chosen for the analysis.
- Reporting in graphical form the percentages of the different labels for the three phenomena (stance/hate speech/irony) and of the disagreement that cannot be resolved by a majority (D) out of the total.
- Each group will then have to choose to focus the analysis report on one phenomenon among those noted: stance/hate speech/irony.
- For the chosen phenomenon, the report must contain (to be extended as you prefer):
 - A brief description of the annotation task you are focusing on
 - A comment on the guidelines used for the annotation of the phenomenon
 - A possible list of shared tasks of evaluation campaigns (e.g. Semeval, EVALITA, IberEval/IberLEF, ...) proposed for (or related to) that task (if any).
 - One or more examples of annotated tweets where different phenomena intersect (e.g., hate speech and irony/sarcasm).
 - An analysis of the annotation results with particular attention to agreement and disagreement:
 - 1. Compute the Fleiss' Kappa:
 - agreement among all the annotators
 - perspective-based agreement (e.g. gender)
 - i. e.g., female annotators
 - ii. e.g., male annotators

[consider other gender dimensions, depending on the profiles of the annotators of your groups]
 - Comment on hard cases: select and comment the data on which there was greater disagreement also using the information relating to the profile of the annotator if useful, in relation to the particular trait chosen (gender).
 - Elaborate on ethical issues which can be relevant w.r.t. this task in your opinion.

Delivery: Upload on Moodle page of the course:

<https://elearning.unito.it/scienzeumanistiche/course/view.php?id=9728>

Each group through its representative will have to deliver via the Moodle platform on the course page (a new section on delivery of project works will be created):

- A. **Data:** the **downloaded csv file** containing the tweets and all the annotations, extended with a new column with the heading GOLD for each level of annotation (GOLD stance/ GOLD hate speech/GOLD irony) where the gold label was calculated for each tweet and each level of annotation according to a majority aggregation (majority vote), where it emerges. Where the majority does not emerge, label the corresponding cell with D (disagreement) and qualitatively analyze the disagreement in the report. It is recommended to open the csv with a SpreadSheet/Spreadsheet program and work with it to proceed with the extension.
- B. **Report:** a written report on the annotation project (10 pages max).

Upload on the Moodle section related to your exam date a single .zip file containing all the files requested for the project work (data and report).

Please, give the file the name of your group. It is expected that the contact person for the group will upload the file.

Important: please start the report with a sort of 'cover page' including the name of the group and all the names of the group members that contributed to the report. The cover page will be considered extra w.r.t. the page limit.

Instructions for Annotation Lab. 2

Recognizing cancelling attitudes: an annotation task (PW2)

Instructions are available here:

https://docs.google.com/document/d/13TvrPJQtQCgyomVoeuzKTUXGaW8Y_W_SdrnA-mY7zIQ/edit?usp=sharing

Deadlines

ALL STUDENTS

The **data and the reports** on the project work must be delivered **three days before** the official date of the exam.