PROJECT PROPOSAL TEXT ANALYTICS

GROUP 1:

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GROUP MEMBERS PRESENTATION

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MOTIVATION & ISSUES

Toxic Tweets Dataset

·WHY?

Social Network Role in people's lives

Social haters



- **54313** records
- 0: non-toxic, 1: toxic: tweets classified by a binary code
- Tweets are very short messages. For this reason we need enough data to train our models.
- There is no a particular topic about the toxicity of the tweets, the corpus is varied.



WHAT IS "TOXICITY"?

- What is a toxic tweet?
 - Insults, disrespect language...
 - It can also be caught in a specific context: retweets, answers,...
 - For example: a Tweeter user can qualify another one as a "cunt", one of the answer can agree to this without using an equivalent lexicon.





- The dataset will be randomly divided into 2 sections:
 - the training set, a set of examples used to train a supervised predictive model capable of determining the target value for new examples.
 - The trained model will be evaluated on a new set of examples, the **test set**, which are not used during training.



• TOOLS:

- **Transformer**: it uses a new form of Neural Network
- Algorithms for supervised learning contained in sckitlearn framework and then compared by k-fold cross validation.



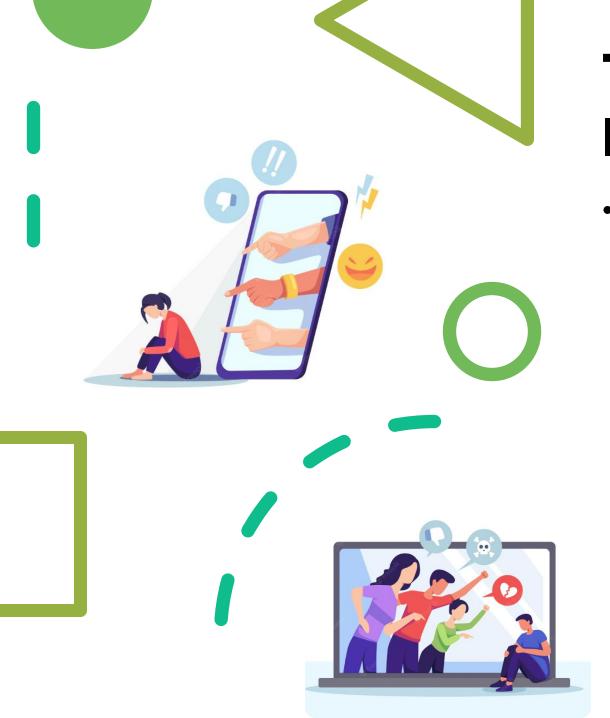


Sentiment analyzer

MODEL:

- **Vector Space Model:** to measure the similarity between the various vectors previously transformed to determine the nature of tweets.
- A graphic representation by grouping the various results obtained, in several cluster. => A better distinction of categories to which tweets belong.





TOXICITY TYPES IDENTIFICATION

- Types of toxicity expected:
 - Gender inequalities
 - Xenophobia
 - Cyberbullying

How to identify them?

- using topic modeling methods
- IDEA: to detect latent topics from our corpus. To go further, we can identify the types of insults used according to a certain keyword ("women", "blacklivesmatter", ..)

IMPLEMENTATION & EVALUATION



Implementation:

Python Jupyter Notebook



THANKS FOR YOUR ATTENTION!

