Automatic moderator

Identify and classify toxic online comments

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Abstract

Context	Toxic comments: violence, hostility and discrimination;
Need	How to moderate toxic comments ?
Problem	How to identify them ?
Solution	Create a tool to detect toxic comments.

Formalization

$$\forall comment \in Comments,$$

$$\forall category \in \{toxic, severe\_toxic, obscene, threat, insult, identity\_hate\}$$

$$\mathscr{R}(comment, category) \in [0, 1]$$

where $\mathscr{R}$ is a regression function.

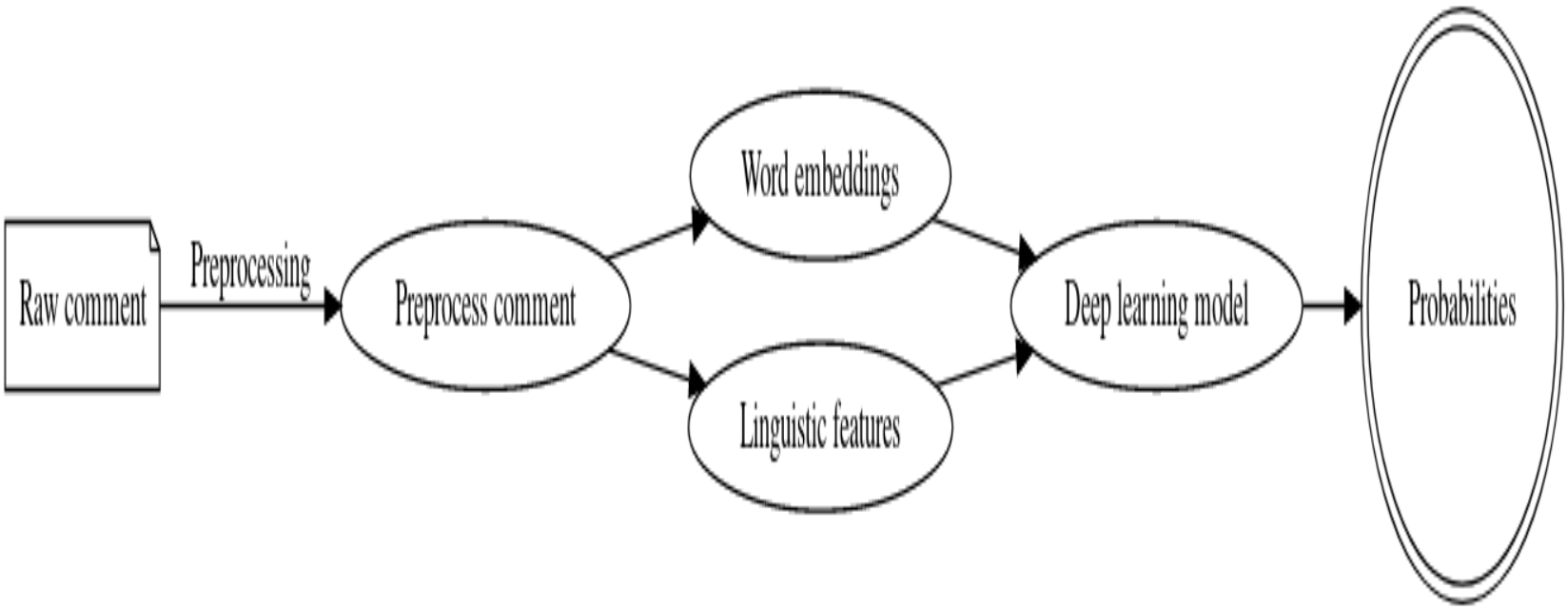
Example

Stupid peace of shit stop deleting my stuff asshole go die and fall in a hole go to hell!

Classified as:

Toxic	Severe toxic	Obscene	Threat	Insult	Identity hate
1	1	1	0	1	0

Proposed solution



Required skills

Technical skills:

- Python coding;
- Data visualization;
- Data exploration;
- Machine Learning algorithms;
- Deep Learning;
- Linguistic analysis.

Soft skills:

- Communication;
- Team works;
- Writing;
- Project management;
- Vulgarization.

Corpora used

Kaggle Dataset:

- CSV corpus of wikipedia comments (313k);
- Labeled by human users for toxic behavior;
- Different types of toxicity.

Waseem and Hovy [10] Dataset:

- Corpus of tweets (16k);
- Labeled by human users for offensive discourse;
- Only one type of label : offensive or not-offensive.

Milestones

02/10/2019	Proposal and subject presentation;
06/11/2019	Bibliographic research , data vizualisation and modeling from [1];
27/11/2019	Additional preprocessing , linguistic definition of toxicity;
06/01/2020	Test on more complex models and report;
16/01/2020	Defense.

Team members

Maxime Guillaume

- Main skills: Statistics, Python coding, Machine Learning;
- Role: Software Developer, Solution Architect.

Guilherme Razet

- Main skills: Python coding, writing, vulgarization;
- Role: Software Developer, Vulgarizer.

Sophea Ly

- Main skills: Python coding, writing, data exploration;
- Role: Tester, Feature Engineer.

Yi-ting Tsai

- Main skills: Linguistic analysis, data visualization, writing;
- Role: Linguistic Expert, Project Manager.

Github - 1/2

`github.com/mxmgllm/905-toxic_comment_classification`

- bin ← *compiled model code*
- config ← *configuration files*
- data
  - external ← *data from thrid party sources*
  - interim ← *intermediate data that has been transformed*
  - processed ← *final data*
  - raw ← *original data*
- docs ← *scientific papers*

Github - 2/2

- notebooks ← *python notebooks*
- report ← *LaTeX report*
- src ← *source code*
  - data ← *scripts and programs to process data*
  - external ← *external source code*
  - models ← *source code for model*
  - tools ← *helper scripts*
  - visualization ← *visualization scripts*

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