

Automatic Classification of Underground Forum Post by Gender Context

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Progress Report

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The project aim is to create a successful text classifier that correctly labels underground forum posts by the context in which women are discussed.

The project is currently behind schedule by around two weeks from my original plan. At the beginning of January I created a revised plan in order to get back on track, I am currently one week behind on this schedule but confident that I have allowed enough flexibility that I will soon catch up.

I have accomplished the following:

- Extracted targeted posts from CrimeBB and ExtremeBB databases
- Annotated forum posts according to the decided context classes
- Performed preprocessing and cleaning of the text data
- Implemented different encoding methods of the text data
- Implemented baseline Naive Bayes and Logistic Regression classifiers
- Started implementing SMOTE to create a balanced dataset

The annotation process of the CrimeBB data proved to be more time consuming than I had anticipated. It took a lot of exploratory analysis to determine the best classes to use, there is often a lot of overlap of topics being discussed in forum posts but I still wanted to have meaningful and distinct classes. Selecting data from the huge database was also more difficult as I wanted to extract the most relevant, opinion based posts and try to minimise the posts that just mentioned women in stories. I was recently made aware of the ExtremeBB database, which contains forum posts from extremist sites, most relevant are the Incel communities. These posts added richness to my dataset but required more time to do exploratory analysis to understand the language and slang used.

The ongoing pandemic and unforeseen national lockdowns negatively affected my motivation. The forum posts contain lots of misogyny, descriptions of abuse, misinformation and hate speech. In a time where there is lots of negativity on the news and in our daily lives, I often found it hard to spend time reading and annotating the posts. I also underestimated the amount of time my Unit of Assessment coursework would take, which I prioritised at the end of last term.

As previously mentioned, I have a new schedule with the following milestones for the upcoming months:

Slot 8 - 25th January – 7th February

Create and rehearse the progress report and presentation. Complete SMOTE implementation. Start outline for RNN implementation.

Deadline: Progress Report – 5th February, 12 noon.

Slot 9 - 8th February – 21st February

Progress report presentation to overseers. Complete implementation of RNN. Begin writing the dissertation. Write introduction and preparation chapters.

Milestones: Introduction and preparation drafts to supervisor.

Slot 10 - 22nd February – 7th March

Act on feedback from supervisor. Carry out extensions.

Slot 11 - 8th March – 21st March

Write the implementation chapter.

Milestones: Implementation draft to supervisor.

Slot 12 - 22nd March – 4th April

Act on feedback from supervisor. Write the evaluation chapter.

Milestones: Evaluation draft to supervisor.

Slot 13 - 5th April – 18th April Act on feedback from supervisor. Write the conclusions chapter.

Milestones: Draft dissertation complete and delivered to supervisor.

Slot 14 - 19th April – 2nd May Act on feedback from supervisor and return for more feedback. Continue to make final improvements to the dissertation.

Milestones: Dissertation complete.

Deadlines

- Dissertation Deadline – 14th May, 12 noon.
- Source Code Deadline – 14th May, 5 PM.