## **Feminist Text Analysis, Spring 2023**

Can there be a feminist text analysis? Feminism, text, and analysis in a computational world

## Abstract for Roundtable

"Data Feminism" by D'Ignazio & Klein identifies that data is not objective and reinforces existing social inequalities. Consequently, studying the hidden biases within a text is an important step for building a feminist analysis.

Intersectional feminist theories inform us that social inequalities are better reflected "not by a single axis of social division, but by many axes that work together and influence each other" (Collins & Bilge 2016, p. 2).

Following this idea, to properly critique text analysis, a feminist model should be bi-directional and multi-dimensional (spatial rather than scalar) encoding in itself the context in which words are used to relate to the social divisions at play.

Models like LDA can decode topics but are not context-aware or spatial. Earlier word-embedding models like word2vec are spatial but not context-aware.

The word-embedding model BERT can be suitable in this case. BERT is context-aware and can capture the meaning in which a word is used. Being a multi-dimensional model allows intersectional analysis to be performed, uncovering the relationships between different contextual text use cases. With its sentiment analysis and opinion-mining capabilities, we can uncover those expressed in the text concerning different social identities. Given the model's customizability, it can also be trained to the specific domain.

However, BERT is notoriously computationally intensive. To feminist scholars that is an issue both in terms of environment and accessibility. To achieve compression, we can use BERT to create context-aware word-embeddings but apply knowledge distillation and pruning to reduce computational intensity, optimizing for maximum accuracy.



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This entry was posted in Posts on May 8, 2023 [https://femethods2023.commons.gc.cuny.edu/abstract-for-roundtable-3/] by Muhammad Rakibul Islam (Rakib).

