Annotated Bibliography

Bullet Points: NLP Dissection of Gun Control Discourse

AP Research & Senior Project

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Contents

❖ PREP 15 Questions

1. Has my research question changed or been slightly reoriented in any way since September?
2. Have any newer studies been published in the past three months that might be relevant to the subject of my research question?
3. Are there any key terms or phrases that I have become acquainted with during the process of writing the Literature Review or Methods section drafts that might yield additional sources if entered into JSTOR, EBSCO Host, or other academic journal databases?
4. Do any of these newly located sources challenge any of the underlying principles of my research question or methods? How can I address that in my work?

1.1 Answers

1. Yes, my research question entirely changed since September. I started with a question about the rhetoric used in the debate surrounding the ethicality of Artificial Intelligence, but the API I was using to receieve the data was too expensive. Therefore, I switched to focusing on men's mental health, but looking at the data, I realized that it was all positive, which makes sense since no one would post about their mental health if they were feeling negative. Therefore, I switched to gun control, which is the topic I am currently working on. I am able to access data for free and there are 2 sides with very differing views.
2. Not that I know of yet, but I will continue to look.
3. The main key terms that I have been using in academic journal databases are "gun control," "gun rights," and "gun violence". I have also been using "NLP" and "Natural Language Processing" to find articles about the topic.
4. None of the sources I have found so far have challenged the underlying principles of my research question or methods.

❖ A comprehensive review on resolving ambiguities in natural language processing

References

[1] A. Yadav, A. Patel, and M. Shah, "A comprehensive review on resolving ambiguities in natural language processing," *AI Open*, vol. 2, pp. 85–92, 2021. DOI: 10.1016/j.aiopen.2021.05.001.

2.1 Summary

This academic paper focuses on resolving ambiguities in natural language processing (NLP), a critical tool in the development of AI technologies. It focuses on how NLP tools tackle the challenge of interpreting language accurately, particularly in complex contexts like legal documents. It reviews various approaches: controlled natural languages, knowledge-based methods, checklist-based inspections, and advanced techniques (transfer learning with models like BERT). The paper highlights the difficulty of completely eliminating ambiguities due to the nuanced nature of language, pointing out both the strengths and limitations of current NLP tools. Therefore, there is a need for more refined and robust methodologies in NLP to enhance accuracy in language interpretation and disambiguation.

2.2 Relevance to my project

This paper will be extremely beneficial since it solves a key challenge of sentiment analysis. A simple example of this is the sentence "The chicken is ready to eat". This could mean two things, either the chicken is going to eat something, or the chicken is cooked and ready to be eaten. This is a very simple example, but it shows how important it is to resolve ambiguities for the NLP analysis to give results as accurately as possible. Techniques like controlled natural languages and knowledge-based methods could be instrumental in going through the legal texts. The discussion on transfer learning and BERT is particularly important, as these advanced NLP methodologies could enhance the accuracy of sentiment analysis in my research. Understanding the intricacies of language ambiguities and the tools to resolve them will be crucial in ensuring the precision and reliability of my project findings.

❖ Sentiment Classification of News Text Data Using Intelligent Model

References

[1] S. Zhang, "Sentiment Classification of News Text Data Using Intelligent Model," *Frontiers in Psychology*, vol. 12, Sep. 2021. DOI: 10.3389/fpsyg.2021.758967.

3.1 Summary

This academic paper focuses on the sentiment classification of news text data, emphasizing the importance of understanding context in NLP. It shows how sentiment classification algorithms are domain-dependent, with the same phrase conveying different sentiments in varied contexts. It also introduces a transfer learning discriminative dictionary learning algorithm (TLDDL) for cross-domain text sentiment classification. This approach addresses the challenges of insufficient labeled training data and domain adaptation in sentiment classifiers. The study's experiments on public text datasets demonstrate the effectiveness of the TLDDL in improving sentiment classification performance in various domains.

3.2 Relevance to my project

This paper is relevant to my project because the discussion on domain-dependent sentiment classification and the use of transfer learning techniques like TLDDL offers valuable perspectives for analyzing sentiment in legal texts. The methodology and findings can help guide me in the development or selection of NLP tools for accurately interpreting sentiment in federal gun control cases. Understanding the nuances of context-dependent sentiment and leveraging advanced techniques like TLDDL will be instrumental in achieving precise and reliable sentiment analysis results in my research project.