# Article information:

Deep Learning--based Text Classification: A Comprehensive Review: ACM Computing Surveys: Vol 54, No 3  
<https://dl.acm.org/doi/10.1145/3439726>

# Article summary:

1. Deep learning-based models have outperformed classical machine learning-based approaches in various text classification tasks.

2. The article provides a comprehensive review of over 150 deep learning-based models for text classification and their technical contributions, similarities, and strengths.

3. The article also includes a summary of more than 40 popular datasets used for text classification and a quantitative analysis of the performance of different deep learning models on popular benchmarks.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article "Deep Learning--based Text Classification: A Comprehensive Review" published in ACM Computing Surveys provides a comprehensive review of deep learning-based models for text classification. The article discusses the technical contributions, similarities, and strengths of more than 150 deep learning-based models developed in recent years. It also summarizes more than 40 popular datasets widely used for text classification and provides a quantitative analysis of the performance of different deep learning models on popular benchmarks.

Overall, the article is well-written and informative. However, there are some potential biases and missing points of consideration that need to be addressed. Firstly, the article focuses solely on deep learning-based models for text classification and does not provide a comparison with classical machine learning-based approaches. This one-sided reporting may lead readers to believe that deep learning is always superior to classical machine learning, which is not necessarily true.

Secondly, the article does not discuss the limitations and potential risks associated with using deep learning-based models for text classification. For example, these models may suffer from bias if they are trained on biased datasets or may fail to generalize to new data if they are overfitting to the training data. Additionally, these models require large amounts of labeled data for training, which can be expensive and time-consuming to obtain.

Thirdly, the article does not explore counterarguments or alternative perspectives on the use of deep learning-based models for text classification. For example, some researchers argue that simpler machine learning algorithms such as logistic regression or decision trees can achieve comparable performance with less computational resources.

Finally, there is some promotional content in the article that may bias readers towards certain approaches or techniques. For example, some sections highlight specific deep learning architectures or techniques without providing a balanced discussion of their limitations or drawbacks.

In conclusion, while "Deep Learning--based Text Classification: A Comprehensive Review" provides valuable insights into the state-of-the-art in deep learning-based text classification models, it has some potential biases and missing points of consideration that need to be addressed. Future research should aim to provide a more balanced perspective on the strengths and limitations of different approaches to text classification.

# Topics for further research:

* Limitations of deep learning-based models for text classification
* Comparison of deep learning and classical machine learning for text classification
* Risks of bias in deep learning-based models for text classification
* Overfitting in deep learning-based models for text classification
* Alternative perspectives on text classification using simpler machine learning algorithms
* Drawbacks of specific deep learning architectures and techniques for text classification

# Report location:

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