Comparative Analysis of the Efficiency of Techniques for Detecting Misinformation in Healthcare Data

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Introduction

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- Why are we here?
- What is the article about?

Motivation, problem and my contribution

- Motivation
  - Personal interest in misinformation
  - Learning about machine learning techniques
- Problem
  - Perception of healthcare information found on the Internet
- My contribution
  - Summarizing use of machine learning techniques for healthcare information retrieval
  - Possible use in everyday life for medical misinformation recognition

Related Work

- Machine learning techniques used for information retrieval
  - Naive Bayes
  - Support Vector Machine
  - New machine learning techniques
- Misinformation
  - Misinformation vs. disinformation
  - Medical misinformation

Methodology

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- Finding and understanding the sources
- Extraction of relevant data for the topic
- Creating a comparison of the efficiency of machine learning techniques
- Analyzing the results

Results and Analysis

- Summary of all success rates in accuracy, recall, precision and F1 score according to used sources

	Accuracy			
Naïve Bayes	$88.37\%^1$	$98.71\%^2$	$85.85\%^3$	$84.06\%^4$
Support Vector Machine	$84\%^1$	$94.17\%^2$	$90.95\%^3$	$95.05\%^4$
	Recall			
Naïve Bayes	$84\%^1$	$98.70\%^2$	$-\%^3$	$70.53\%^4$
Support Vector Machine	$84\%^1$	$92.87\%^2$	$-\%^3$	$93.73\%^4$
	Precision			
Naïve Bayes	$84\%^1$	$99.56\%^2$	$-\%^3$	$96.98\%^4$
Support Vector Machine	$85\%^1$	$99.31\%^2$	$-\%^3$	$92.56\%^4$
	F1 score			
Naïve Bayes	$83.5\%^1$	$99.13\%^2$	$-\%^3$	$81.67\%^4$
Support Vector Machine	$84\%^1$	$95.98\%^2$	$-\%^3$	$93.14\%^4$

Results and Analysis

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- Harmonic average of each category according to the sources
- Graphical visualization of the data

Naïve Bayes and Support Vector Machine average efficiency comparison

Discussion and conclusion

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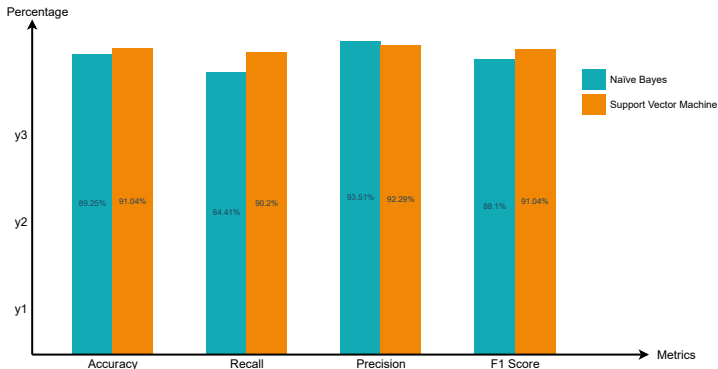
- Conclusion of results
- Comparing efficiency
- Limitations
- Future work