

Fact or Fiction? Detect Fake News with Confidence!



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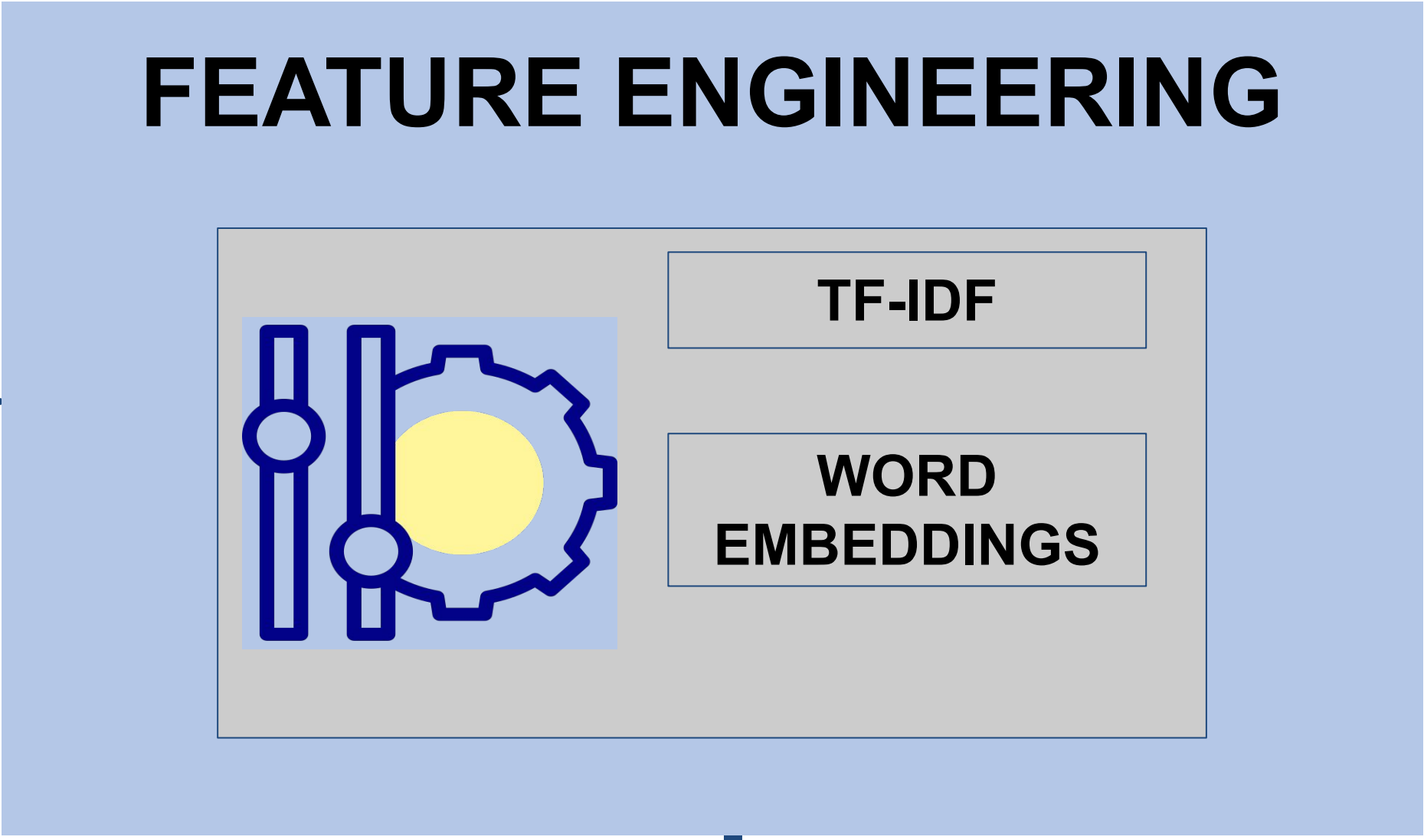
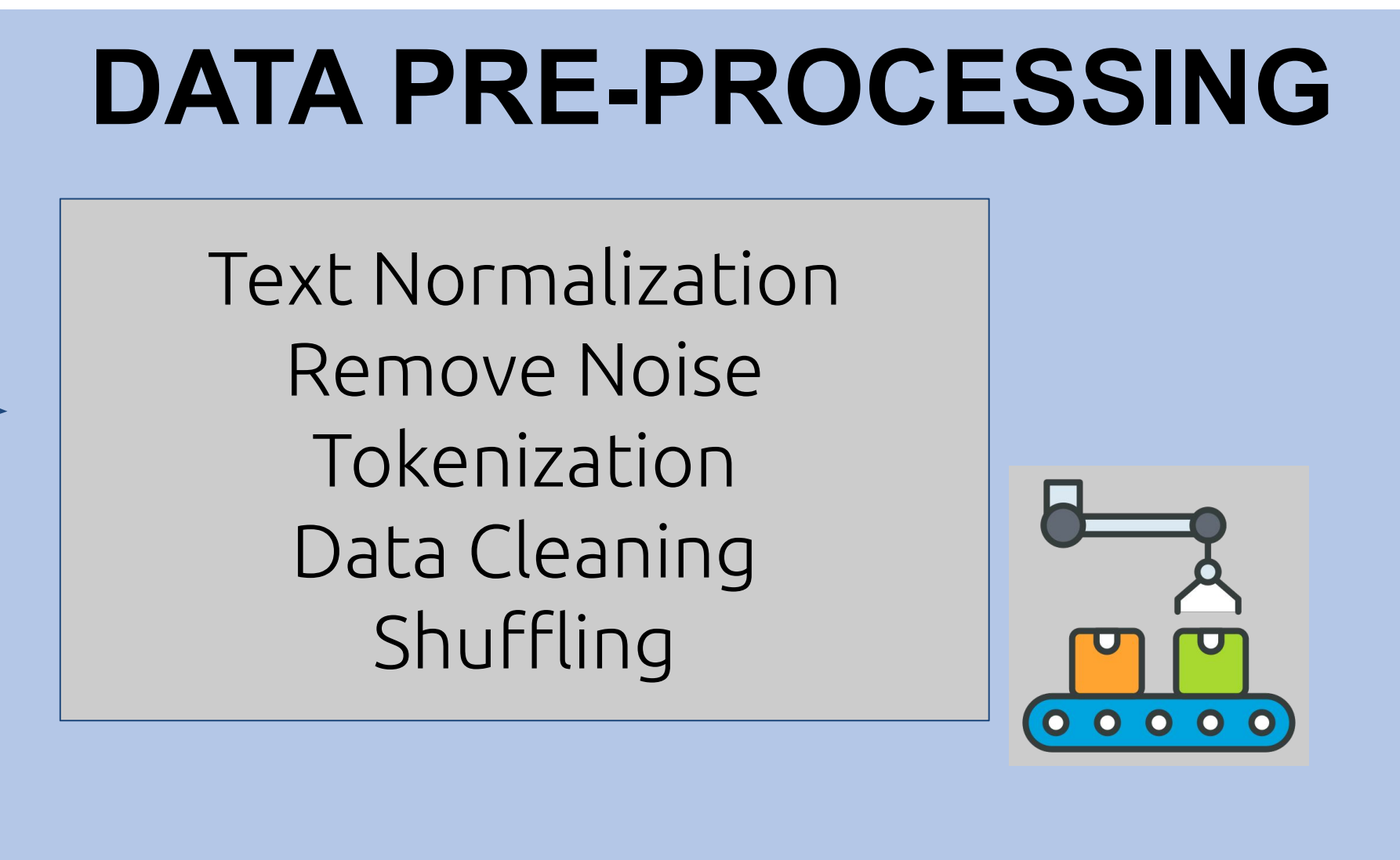
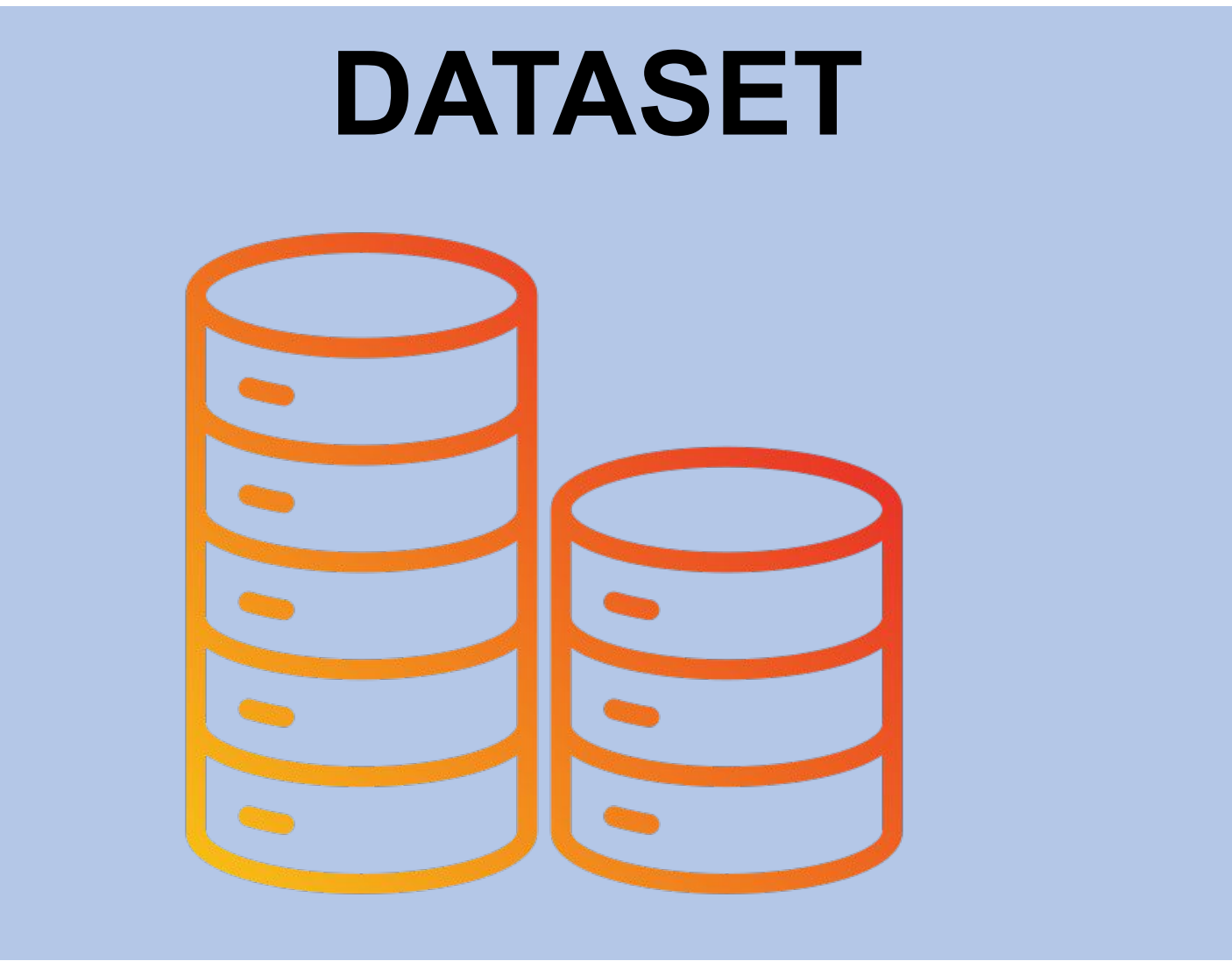
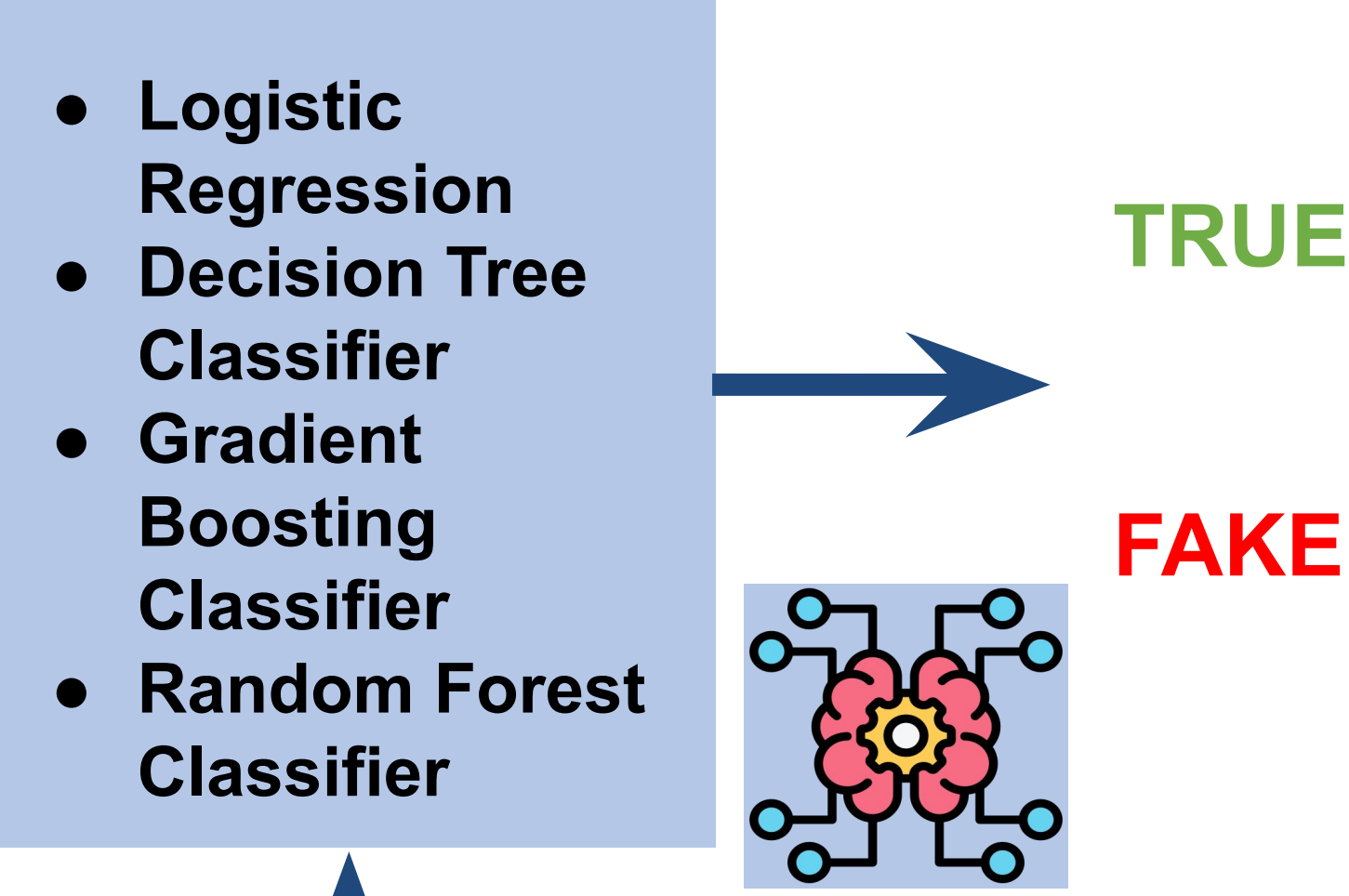
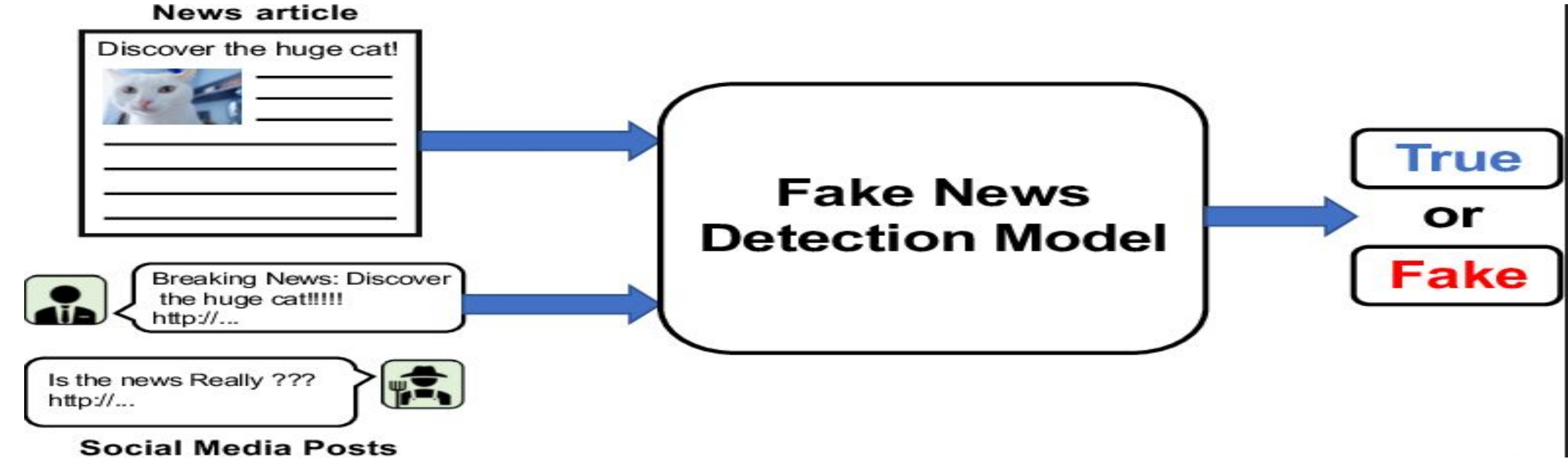
Abstract

- Digital Information Spread & Misinformation:** The challenge of detecting fake news.
- Machine Learning Solutions:** Various algorithms, including BiLSTM, are analyzed.
- Objective:** Classify news articles as real or fake, with optimal algorithms.

Motivation

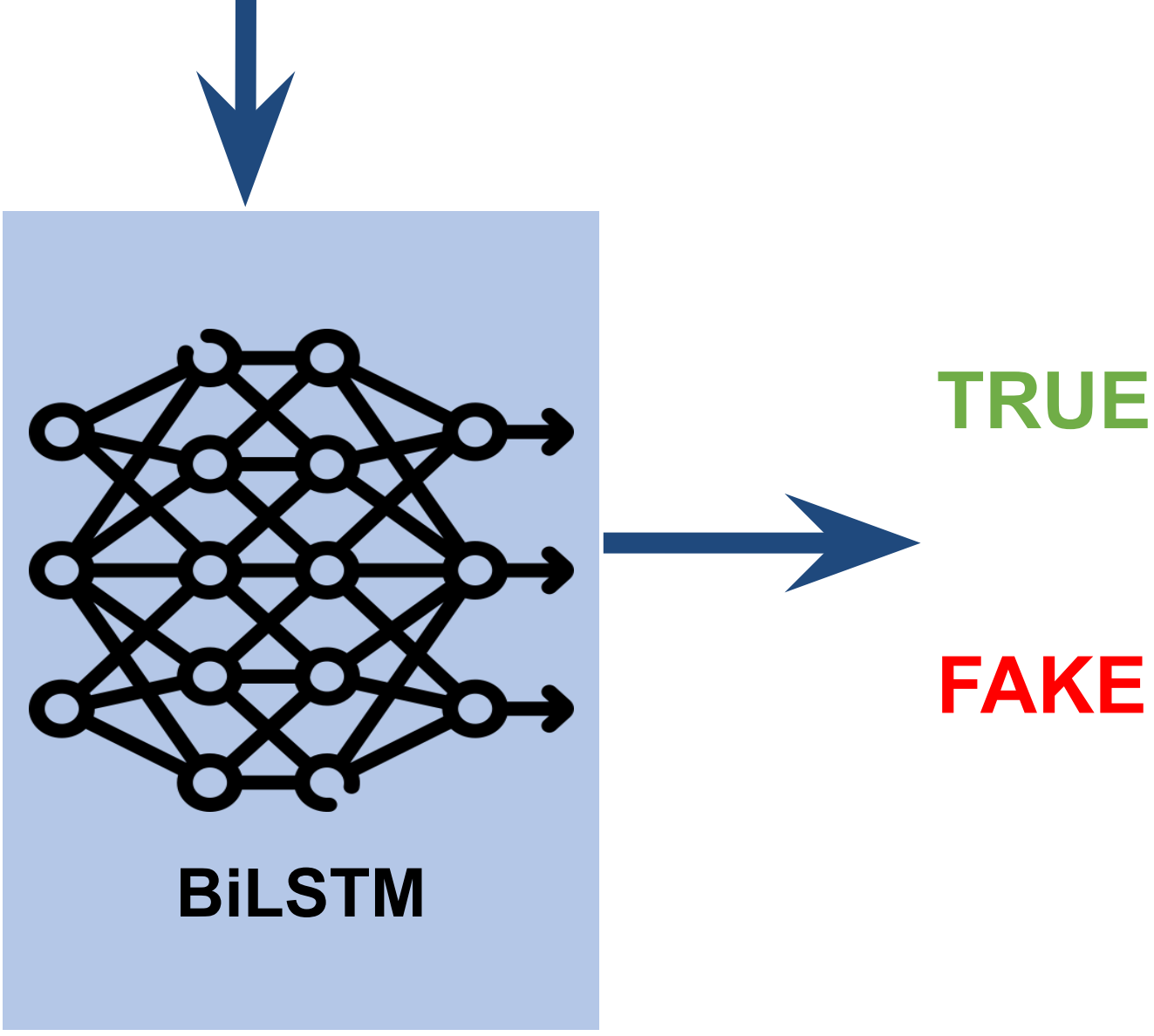
Misinformation Crisis: The rise of social media and digital platforms has led to a massive increase in the spread of misinformation. This not only affects individuals' decision-making but can also have serious social, political, and economic consequences.

Impact on Society: Fake news can influence elections, propagate harmful ideologies, and cause widespread panic during crises (e.g., pandemics, natural disasters).



News Dataset

Title	Text	Subject	Date	Class
Democrats fear hackers targeted tight Florida ...	WASHINGTON (Reuters) - Leading Democrats are g...	politicsNews	August 19, 2016	1
Ron Paul on Burns Oregon Standoff and Jury Nul...	21st Century Wire says If you ve been followin...	Middle-east	January 21, 2016	0



Results

Table 1: Recall, Precision for all the models

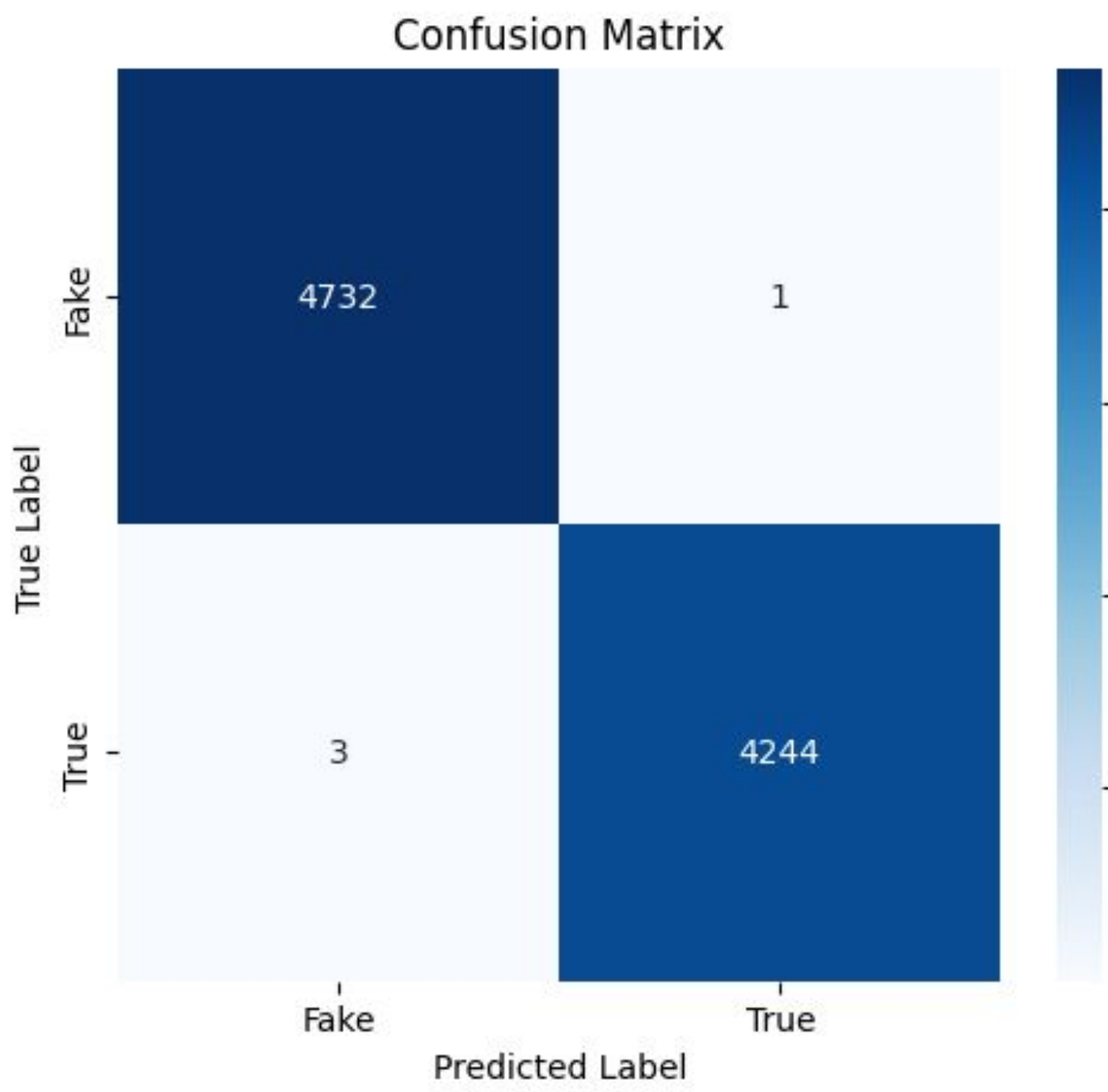
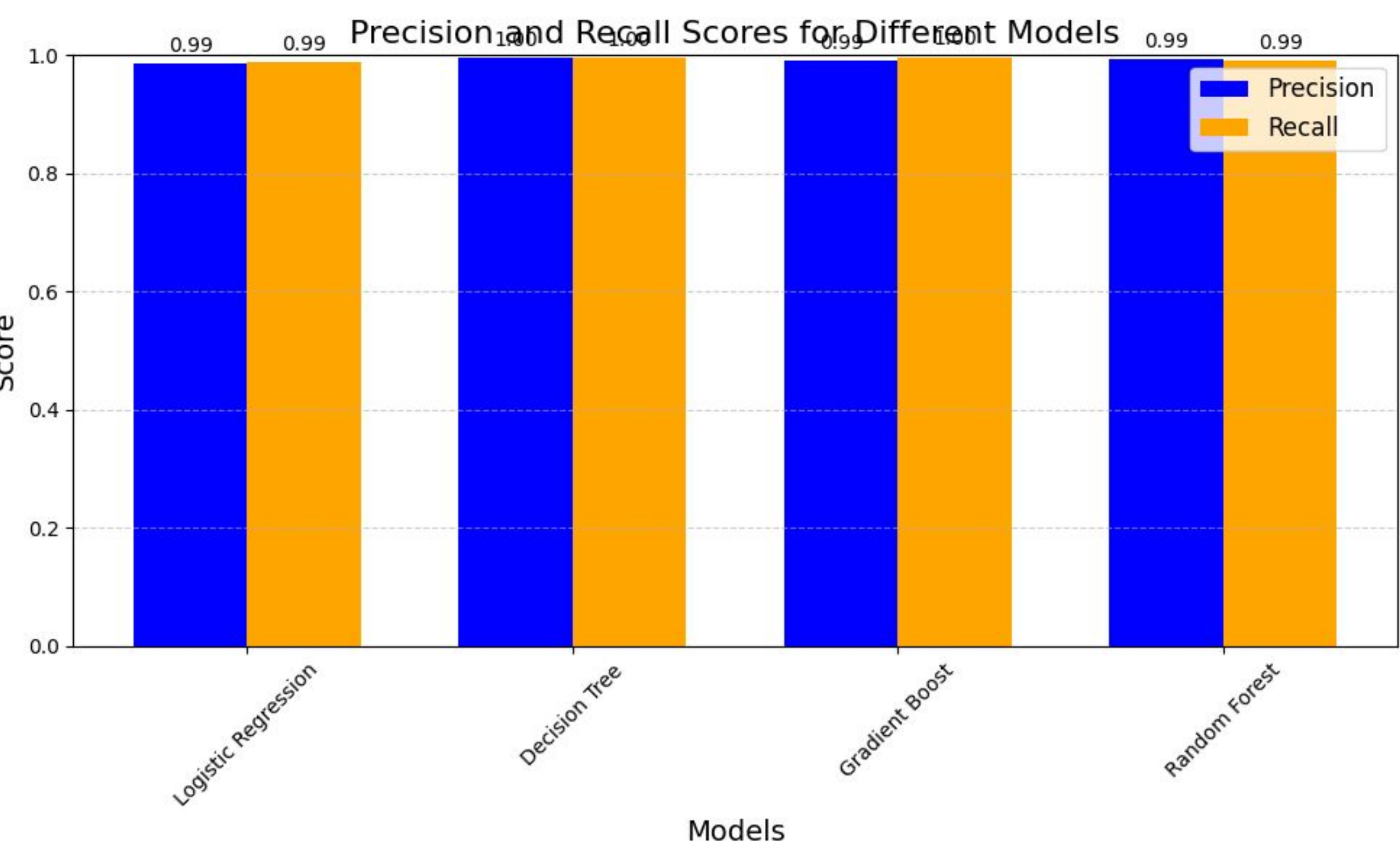


Table 2: Confusion Matrix for BiLSTM

References

[1] Jumana Jouhar, Anju Pratap, Neharin Tijo, Meenakshi Mony, Fake News Detection using Python and Machine Learning
[2] Z Khanam1, B N Alwase1, H Sirafi1 and M Rashid2, Fake News Detection Using Machine Learning Approaches
[3] ISOT Fake News Dataset

Acknowledgements

- Data and Web Science M.Sc. Program
- Natural Language Models class by professor Grigorios Tsoumakas