Paper Title: Toward News Authenticity: Synthesizing Natural Language Processing and Human Expert Opinion to Evaluate News.
Paper Link: https://ieeexplore.ieee.org/document/10034750

1. Summary

1.1 Motivation

The paper addresses the challenges of fake news in the Bangla language, such as the lack of reliable datasets, the complexity of the language, the socio-political influence on news media, and the absence of a proper news evaluation process.

1.2 Contribution

The paper claims to make four contributions: creating an NLP model based on Bangla Bert models, proposing a blockchain-based news verification system using smart contracts, presenting a novel synthesis procedure combining human and machine decisions, and improving the performance of the NLP model by incremental training.

1.3 Methodology

The paper suggests a decentralized platform that combines human expert opinion and machine classification using a novel synthesis procedure. The paper also uses incremental machine learning to keep the NLP model updated with new data.

1.4 Conclusion

The initial accuracies were improved to 93.75% training and 93.80% testing accuracy by incrementally training the mode for 9 rounds. This paper proposed a new evaluation process using blockchain, smart contracts, and NLP that shows great prospects in the pre-evaluation of news.

2. Limitations

2.1 First Limitation

Human expert evaluations are needed. Which is complex and time-consuming in terms of large-scale news authentication

2.2 Second Limitation

The blockchain network is a trade-off between reliability and computational cost because it is expensive in terms of execution and mining time.

3. Synthesis

This paper suggests a blockchain, smart contract, and incremental machine learning-based news evaluation procedure for the Bengali language to overcome the spreading and publishing of fake news in the Bengali language. Weighted synthesis of machine classification and human expert opinion in a decentralized platform are synthesized to evaluate news. With continuous data, the Natural Language Processing (NLP) model is incrementally trained, and the best version of the model is used to detect deprived fake news.