Final Discussions: Comparison with the Base Paper

Our suggested two techniques, hashing trick and hashing-autoencoder, surpass the basis paper, [5], in identifying fake news from Bengali news corpus. The overall performance is pretty comparable between the two, however our suggested methods outperform both in terms of false class identification, which is a significant accomplishment. The average of each class's performance constitutes the final grade. Because the models do a great job of recognizing the true news, the total performance ranges from 97 to 99 percent. Although the false class detection performance was poorer, the total performance was better since the genuine class tainted the entire system. The table 7 compares the performance of our suggested hashing trick and hashing-autoencoder model with that of the source paper using machine learning models. Traditional language characteristics and machine learning approaches are combined in the basis study. As recall is enhanced but accuracy is diminished, the f1-score for the hashing technique appears to be unchanged in this case. However, the hashing-autoencoder is consistently performing better.

Work	Overall (%)			Fake Class (%)		
	Precision	Recall	F-1 Score	Precision	Recall	F-1 Score
Hossain el al [5]	99	99	99	98	84	91
Hashing	97	98	97	89	93	91
Hash-Autoen	98	98	98	98	91	94

Table 7 Machine Learning Performance Comparison with the Base Paper

The table 8 compares the effectiveness of our suggested hashing trick approach with that of the main paper using deep learning models. In the original study, the model was built using the CNN, LSTM, and BERT models, and the BERT model performed better. However, the performance of our suggested strategy for detecting false classes is greatly enhanced.

Work	Overall (%)			Fake Class (%)		
	Precision	Recall	F-1 Score	Precision	Recall	F-1 Score
Hossain el al [5]	99	100	99	80	60	68
Hashing	98	98	98	95	94	94

Table 8   Deep Learning Performance Comparison with the Base Paper