# AI for Fake News Detection

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**Abstract:** *The rapid growth of digital media has significantly transformed the way information is produced and consumed. However, this expansion has also accelerated the spread of fake news, leading to misinformation, public confusion, and large- scale social and political consequences. Traditional manual fact-checking methods are slow, labour-intensive, and unable to keep pace with the volume of online content. To address this challenge, the present study proposes an automated Fake News Detection system using Machine Learning and Natural Language Processing techniques. The method involves text preprocessing, TF-IDF feature extraction, and classification using supervised learning algorithms to distinguish between real and fake news articles. Experimental results show that the model achieves high prediction accuracy with strong generalization capability, demonstrating its effectiveness in reducing misinformation and improving the reliability of online content verification.*

**Keywords**: fake news detection, machine learning, NLP, misinformation, text classification, TF-IDF, supervised learning.