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The Dark Sides of Al: Deep Fake and Mis Information

Subodh D. Pal, Prof D. G. Ingle, Dr A. P. Jadhao, Prof. S. V. Raut, Prof. S. V. Athawale
Department of Computer Science and Engineering,
DRGIT&R College of Engineering Amravati

Abstract: *Artificial Intelligence (Al) has transformed digital communication and content creation. While its applications promise efficiency, personalization, and innovation, the misuse of Al-driven tools such as deepfakes poses growing risks to information integrity and societal trust. Deepfake technology, based on generative adversarial networks (GANs) and advanced machine learning, enables the creation of hyper-realistic synthetic media that can spread misinformation, manipulate markets, and damage reputations. This paper explores the evolution of deepfakes and misinformation, reviews existing detection approaches, and proposes a hybrid Al model combining natural language processing (NLP) and deep learning-based image forensics for improved detection. The study emphasizes the urgent need for technical, regulatory, and ethical frameworks to mitigate the misuse of Al while preserving its positive potential.*

Keywords: ArtificiaI Intelligence, Deepfake, Misinformation, Fake News, Cybersecurity, GAN, Trust, Digital Ethics

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