In reviewing the landscape of deepfake audio detection, it becomes evident that deep learning techniques offer robust solutions to the challenges posed by audio-based misinformation. Convolutional Neural Networks (CNNs) and Recurrent Neural Networks (RNNs) have shown promise in effectively processing audio data, with CNNs excelling in feature extraction from spectrograms and RNNs capturing temporal dependencies disrupted by deepfakes. Generative Adversarial Networks (GANs) play a dual role, both in creating realistic deepfake audio and bolstering detection methods through adversarial training. Despite these advancements, there remain significant avenues for future research, particularly in enhancing the scalability and real-time application of these detection models. Continued exploration into hybrid models and integration with other artificial intelligence systems could further strengthen the accuracy and efficiency of deepfake audio detection, thereby fortifying digital media integrity against evolving threats.