Submission Summary

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Track Name
Artificial Intelligence, Machine Learning & Data Science

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264

Paper Title
A Privacy Preserving & Accessible Deep Fake Video Detection System Using Face-Based Analysis

Abstract
Deep Fake videos have become increasingly widespread, making it difficult for the general public to identify manipulated media. Most existing forensic tools are either limited to research environments or require special authorization, restricting access for everyday users. To address this gap, we propose a privacy-preserving Deep Fake detection system designed specifically for open public use. The system analyzes videos through frame sampling, face localization with MTCNN, and spatial preprocessing before classification with an EfficientNet-B7 model. A confidence-based aggregation mechanism integrates face-level predictions to generate a final REAL/FAKE decision. The framework operates through a user-friendly web interface where individuals can upload videos securely; no data is stored on the server, ensuring full privacy. Experimental results show that the system provides accurate decisions and highlights suspicious frames, making Deep Fake detection both reliable and accessible to ordinary users. This work aims to democratize Deep Fake forensics by offering a transparent, free, and secure solution for the general public.

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Submission Files
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