

Women's Defence: Uncovering Morphed Media to Combat Digital Violence

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Abstract: *These days, the misuse of technology has led to new and harmful ways of targeting people—especially women. One of the most alarming developments is the rise of morphed images and deepfake videos used to shame, harass, or blackmail. Since these fake visuals are often almost impossible to spot with the naked eye, it's easy for those responsible to spread lies and avoid getting caught. Although there are tools out there to check if media is real, they tend to be too complex, not very accurate with subtle edits, or simply out of reach for most people.*

To help combat this, a tool called "Women's Defence" was created using machine learning. It's designed specifically to detect manipulated images of women, combining advanced image processing with the power of Convolutional Neural Networks (CNNs) to figure out if an image is real or fake. The system was trained using a dataset from Kaggle and can pick up on editing patterns that most people would miss.

The backend is built with Python and TensorFlow, while the user interface uses Flask and HTML/CSS. It's simple to use—just upload an image, and it quickly tells you whether it's been altered. With over 90% accuracy and fast response times, it's both powerful and user-friendly.

But this isn't just about technology. It's about giving women a way to take back control of their digital lives and fight against online abuse with the help of smart, accessible tools..

Keywords: Morphed Media Detection, Deepfake Identification, Digital Violence Prevention, Women's Cybersecurity, Convolutional Neural Networks (CNN), Image Classification, TensorFlow/Keras, Flask Web Application, Computer Vision, Real-time Media Forensics

