Deepfake Detection Framework

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Motivation

Deefake is the buzzword that has no agreed-upon technical definition. It consists of two words, deep and fake. Deep is referring to deep machine learning, which is used for creating fake voices, images, or even videos.

It is a fast growing technical field of study and could be a major threat to society because the human ability to recognize fake media from the originals is in contradiction to their quality.

![Figure 1: Subjective answers from ANOVA test for different deepfake categories. Retrieved from [1]](image1)

![Figure 2.1: Examples of real and fake attribute manipulation category. Retrieved from [2].](image2)

![Figure 2.2: Examples of real and fake audio/text to video fake category. Retrieved from [2].](image3)

Detect types of deepfakes

![Figure 3.1: High-level design of whole framework](image4)

![Figure 3.2: Request processing detail](image5)

![Figure 3.3: Processing unit pipeline](image6)

![Figure 5.1: Client application wireframes and implementation screens](image7)

![Figure 6.1: CPU load during small bursts test](image8)

References
