Protecting Against Copyright Infringement Using Data-Labeling

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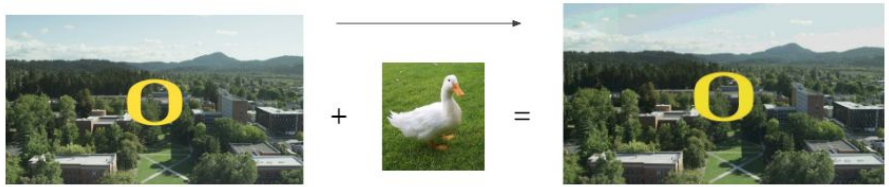


The Problem:

Images, Text, Audio, Images and much more is shared online against the permission of the owner.

The Solution:

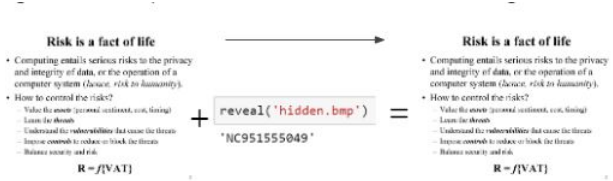
Use Data-labeling to hide metadata of the person it belongs to. If leaked the data can be extracted to determine the culprit.

Method:

First we will encrypt the metadata to ensure it cannot be read if found. Then we use steganography to place the data into the file hiddenly.

Image Example:

This example shows how a teacher could store a students id into a file. This way if it is share online or with classmates it can be traced back.



Audio:

Tested storing data within the audio file to compare the file sizes. Promising results showed that this can work with minimal distortion and possible optimization of storage space.

Steganography:

Using Least Significant Bit method (LSB) we were able to store this data hiddenly in the files. Other algorithms exist. With our research we learned they vary in ease, size change, and physical change. Choosing which is best is a case by case scenario.

Meta Data:

Hashing a list containing certain details about the user, hashing the information and sending it stored with the serial number on the client side can prevent possible data breach on the server side. Can only be accessed with hashed serial number.e.g. [first, last, cc_info, serial_num]