

# Digital Watermarking - Final Project

## Code Documentation

### **Directories**

We organize our code in different directories to ease access.

- `copy_attack`
- `doc`
- `images`
- `sandbox`
- `secure_against_copy_attack`
- `starting_files`
- `testing_robustness`

Directories which are particular of interest would be **`copy_attack`**, **`secure_against_copy_attack`** and **`testing_robustness`**. The other directories are for documentation, test and initial files.

### **Running a script**

There are two ways to run the script. In terminal;

```
octave <script-name>
```

Or inside Octave interactive shell;

```
run <script-name>
```

If the system is complaining that a package is missing, install the package by using the following commands inside the Octave interactive shell:

```
pkg install image-2.4.1.tar.gz  
pkg load all
```

### **`copy_attack`**

We put the implementation of a `copy_attack` in this folder. The images are also located inside this folder. The script involved is **`copy_attack.m`**. Recovered string, is shown in standard out.

### **`testing_robustness`**

In order to test whether, the watermarking system is robust against normal transformations, we have prepared several different scripts:

- `text2png_averaging_filter.m`
- `text2png_cropping.m`
- `text2png_jpg_compression.m`
- `text2png_noise.m`

Each script should be run separately and each script will create new output images.

### **`secure_against_copy_attack`**

This is the implementation of our secure watermarking. A lot of the functions are separated in different files. To run the embedding in its entirety, run the script **`secure_against_copy_attack.m`**. The results would be shown in the standard out.