Zero watermark verification

1. Use the working platform: **pytorch**+**jupyter notebook**

2. There are two folders in the file, ***style*** is the protected image data, and ***verify*** is the result extracted by using the watermark extraction code.

3.***ver*** is the data set file in .dat format formed by the zero watermark generated by the protected image and l2.png in the style; ***extract\_l2\_1.pth*** is the trained watermark verification network parameter, you can use this path directly during verification, without The network needs to be trained.

4***.verify.ipynb*** is the watermark verification code. [4] In order to load the dataset code, the zero-watermark images to be verified for copyright can be changed by modification. [7] uses the existing network parameters ***extract\_l2\_1.pth***, which can be modified to extract images of different copyrights. For the four file paths in [8], **source\_path** is for the protected image data, which needs to be prepared in advance and placed in the same path as the code; **save\_path** is the zero-watermark image used, which is the image in the ***ver*** database in this experiment; ***save\_res\_path*** Save path for the extracted watermark result; ***save\_source\_path*** is the corresponding protected image.

Protect image Generate zero watermark Extracted Copyright image





