

为了运行速度，读取图片后立即对图片进行了 `resize (600,800)`;

项目目录结构:

TestSvm

```
|_____
|   |__x64
|   |__*.cpp
|   |__*.hpp
|   |__testSet
|   |_____
|       |__ImageData
|           |__*.jpg           //测试集
|           |__svmmnist.xml    //svm 训练结果
|           |__data.csv        //学号手机身份证
|           |__A4_correction    //A4 矫正结果
|           |_____ |__*.bmp
|           |__threshold        //二值化
|           |_____ |__*.bmp
|           |__row_div           //行分裂
|           |_____ |__*.bmp
|           |__col_div           //列分裂
|           |_____ |__*.bmp
```

Here is the main function

```
total: 1.4.3.3;
int n_trimg = 60000; //训练集大小
int n_testing = 10000; //测试集大小
int n_features = 324; //hog特征向量维度。

int main()
{
    auto hog = new HOGDescriptor(Size(28, 28), Size(14, 14), Size(7, 7), Size(7, 7), 9);
    n_features = hog->getDescriptorSize();
    cout << "nfeatures" << n_features << endl;
    test t;

    //t.train();
    t.loadSVM();

    t.processFromDir("C:\\Users\\Administrator\\source\\repos\\testsvm\\testsvm\\testSet\\ImageData");
    while (1);
}
```

Recommand for loadSVM rather than train it, it will take more than ten minutes.

And there is surely a train procedure in test::train, you can remove the `//` before `"t.train()"` and right click train(), then select go to definition to check it.

Hand written digits detection not done well, some rows combine together and are processed as one line, some digits interact with each other in column dimension, and cause two or more digits are recognized as one digit.

Otherwise, some well split digit divided into wrong labels, for most '9', the program cannot

depart it as a 9, more likely a 1 or 7.

Totally the success rate is not acceptable; I get no one totally successful detection in ten papers.