

## U-net 网络做人脸关键点回归

直接回归法效果很差，heatmap 热力图方法：

数据集划分为训练集、验证集和测试集，

用精灵标记助手标记 生成.xml 文件；解析.xml 文件生成关键点.txt

文件;搭建 U-net;将网络输出与 label 输出 loss，优化。

train

```
Run: train x
179-2-train_loss:0.0031016103457659483
179-3-train_loss:0.002273104852065444
179-4-train_loss:0.0035847246181219816
179-5-train_loss:0.0026566616725176573
179-6-train_loss:0.001954801147803664
179-7-train_loss:0.002777744084596634
179-8-train_loss:0.0007309878128580749
179-9-train_loss:0.0024278461933135986
180-0-train_loss:0.0017635384574532509
180-1-train_loss:0.0028502377681434155
180-2-train_loss:0.001777139725163579
180-3-train_loss:0.003521975828334689
180-4-train_loss:0.0010039058979600668
180-5-train_loss:0.005382992792874575
180-6-train_loss:0.002925014588981867
180-7-train_loss:0.007476971484720707
180-8-train_loss:0.003266868880018592
180-9-train_loss:0.014228924177587032
save successfully
181-0-train_loss:0.01766235940158367
181-1-train_loss:0.007290740497410297
```

test result

