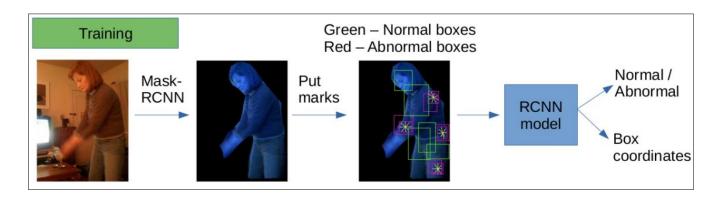
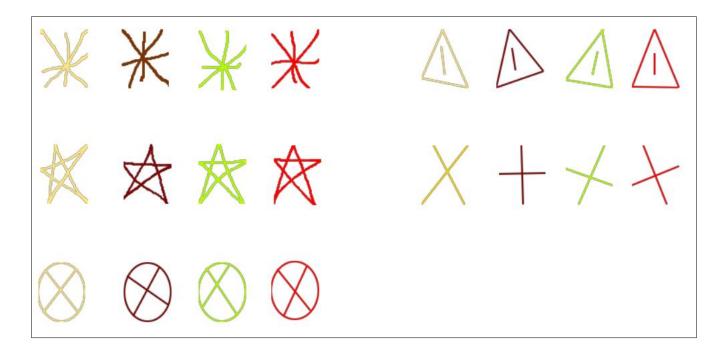
## > Training Part -



### Marks put in the training images – (with different sizes)



# > RCNN Model Used for Training -

- ◆ Faster RCNN (pretrained on COCO dataset)
- ♦ 1500 iterations
- ◆ Train 2090, Validation 114, Test 897

#### > Training Result -

Average Precisions (AP) of Bounding Boxes,

AP : 84.21 AP50 : 95.03 AP75 : 94.00 Apm : 95.80 Aps : 81.18

cls\_accuracy : 0.9941 false\_negative : 0.0121 fg\_cls\_accuracy : 0.9941

loss\_box\_reg : 0. 0703 loss\_cls : 0. 0142 loss\_rpn\_cls : 0. 0003 loss\_rpn\_loc : 0. 0044 total\_loss : 0. 0902

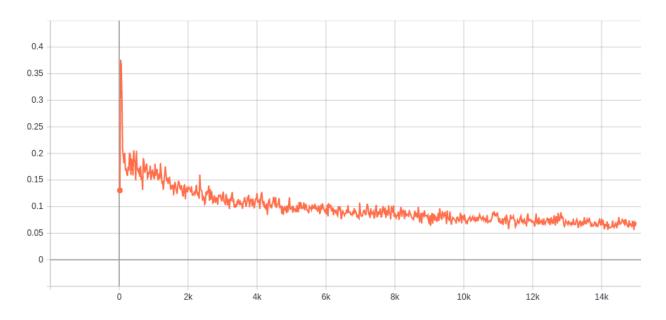


Figure.1: Bounding Box Regression Loss

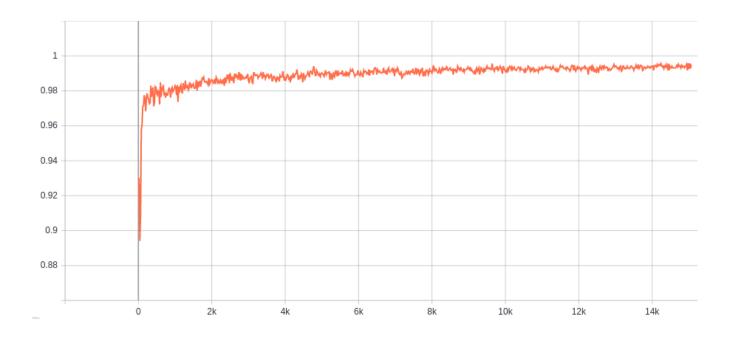


Figure.2: Class Accuracy

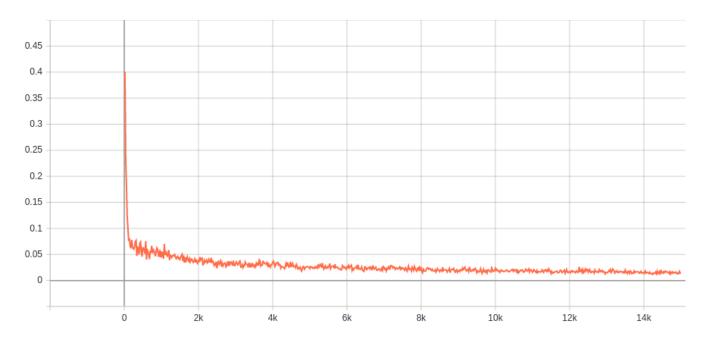


Figure.3: Class Loss

#### > Test Result -

Average Precisions (AP) of Bounding Boxes,

AP : 84.71 AP50 : 97.01 AP75 : 94.95 Apm : 93.821 Aps : 81.86

# > Random Test images with prediction from trained model

