| MODEL | USEFUL FOR | CHARACTERISTICS |
|---|---|---|
| U-NET | Semantic Segmentation | - A CNN developed for biomedical image segmentation.<br>- Modified and extended to work with fewer training images and to yield more precise segmentations.<br>- To predict the pixels in the border region of the image, the missing context is extrapolated by mirroring the input image. |
| Mask-RCNN | Detection | - Perform detection on various region proposals and thus end up performing prediction multiple times for various regions in a image.<br>- extends Faster R-CNN by adding a branch for predicting an object mask in parallel with the existing branch for bounding box recognition. |
| Faster-RCNN | Detection | - Perform detection on various region proposals and thus end up performing prediction multiple times for various regions in a image.<br>- **Faster R-CNN** consists of two stages. The first stage, called a Region Proposal Network (RPN), proposes candidate object bounding boxes |
| Keras - RetinaNeT | Detection | RetinaNet has been formed by making two improvements over existing single stage object detection models (like YOLO and SSD):<br>    Feature Pyramid Networks for Object Detection<br>    Focal Loss for Dense Object Detection |
| SSD | Detection | - Single Shot Detector<br>- runs a convolutional network on input image only once and calculates a feature map. |
| YOLOv3 | Detection | - You Only Look Once<br>- Fast |
| DenseNet | Classification | - it is a logical extension of ResNet, where you merge (additive) a previous layer into a future layer.<br>- in ResNet by adding additive merges we are forcing the network to learn residuals<br>Whereas in densenet :<br>it proposes concatenating outputs from the previous layers instead of using the summation. |