Today's Agenda

1) Detectron 2 Segmentation
2) TF Segmentation

All Practicals OD → Faster RCNN, YOLO, SSD

TFOD → SSP Mobilenet

IS → MASK RCNN

Very Rare → Keras Tuner

Lr Scheduler

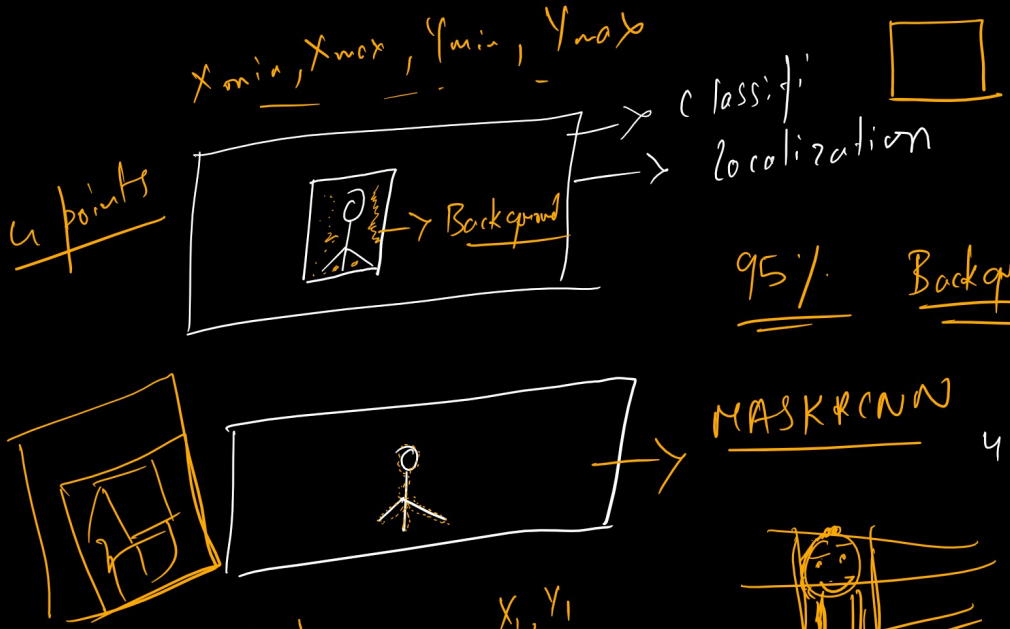
Session Crash

R MNIST

IC MNIST

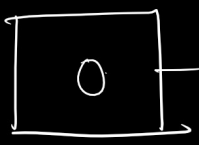
7 days

CV Projects



Segmentation → Creating Masks / Locating exact coordinates

1) Healthcare → Death
   · Tumour



2) Autonomous Vehicle → Death

1) MASK RCNN

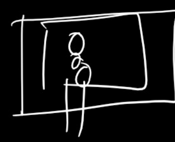
Segmentation :

3 Types
- → Semantic Segmentation
- → Instance Segmentation
- → Panoptic Segmentation

Semantic :

1) Background will be (if # Every pixel except the object pixel)
2) (White patches block on objects are applied

Patches / Masks

S	I	 P
Background :- Black Object Mask :- White Will always be white Opaque -->	Background :- Normal / BW Object Mask :- Transparent Mask will be of different colours Transparent	Background :- Coloured Mask Object :- Coloured opaque Mask will be of different colours. Opaque ROI

GANS ->
28 x 4

Blur

28 x 28

mosaic dilation ->

Super Resolution

25%

ESRGANS

SR GANS

400 x 400

28

400

cooked up values

28 400

Images / Annotations

1) labelme

Bounding Box -> OD

Polygon -> Seg

limit in no of points

Darwin V7

Supervisely

x_1, y_1

x_n, y_n

Tools

Labelme → .json → coco format

Labelme to coco

Data Ready

CV2 → openCV

BGR → RGB

Labelme

Basics of Segmentation

Data Preparation / Annotation

Detectron2 Segmentation

TFOD

Pascal

Basketball

10

2500