Object Detection:

Labeling Formats

Object Detection: Labeling Formats

Introduction

	Pascal VOC	COCO	YOLO
Full Name	Patterns Analysis, Statistical Modelling, and Computational Learning Visual Object Classes Challenge	Common Objects in Context	You Only look once
Developed by	University of Oxford	Microsoft	Joseph Redmon and Ali Farhadi
Number Classes	20	91	depending on data
Labelled Images	3000	2.5 Million	depending on data

Object Detection: Labeling Formats

Introduction

- different labeling formats exist for object detection

```xml
<annotation>
    <folder>images</folder>
    <filename>maksssksksss0.png</filename>
    <size>
        <width>512</width>
        <height>366</height>
        <depth>3</depth>
    </size>
    <segmented>0</segmented>
    <object>
        <name>without_mask</name>
        <pose>Unspecified</pose>
        <truncated>0</truncated>
        <occluded>0</occluded>
        <difficult>0</difficult>
        <bndbox>
            <xmin>79</xmin>
            <ymin>105</ymin>
            <xmax>109</xmax>
            <ymax>142</ymax>
        </bndbox>
    </object>

```

```json
{
"annotations": [
    {
    "segmentation": {
        "counts": [34, 55, 10, 71],
        "size": [240, 480]
    },
    "area": 600.4,
    "iscrowd": 1,
    "Image_id": 122214,
    "bbox": [473.05, 395.45, 38.65, 28.92],
    "category_id": 15,
    "id": 934
    }
    ]
}
```

```
1 0.18359375 0.337431693989071 0.05859375 0.10109289617486339
0 0.4013671875 0.3333333333333333 0.080078125 0.12021857923497267
1 0.6689453125 0.3155737704918033 0.068359375 0.13934426229508196
```

Pascal VOC   COCO   YOLO

Object Detection: Labeling Formats

Label Formats

	Pascal VOC	COCO	YOLO
File Type	XML	JSON	TXT
Nr. Files	One per image	one for complete dataset	one per image
Bounding Box	top-left point (xmin, ymin), bottom-right (xmax, ymax)	X top left, y top left, width, height	x center, y center, width, height