

Wobot.ai Assignment

Name of the student: Shubham L. Deshmukh

College: Vishwakarma Institute of technology, Pune

Branch: E&TC

Year: 4th (B.Tech)

Stage 3: mAP

Q] Hardhat/ Head detection using Deep learning techniques and predicting it on the given test images and output in the form of .xml file.

A] Methodology:

Step 1: Using the same weights, cfg , names files got from the YOLOv4 custom trained model and using them to predict the bounding boxes of 2 classes in the test images.

Step 2: Developing a code that would write a .xml for the classes and the coordinates of the various bounding boxes. Here library pascal-voc-writer was used to write the .xml file

B] Results:

```
<?xml version="1.0"?>

<annotation><folder>Images</folder><filename>hard_hat_workers986.png</filename><path>C:\Users\admin\Desktop\Images\hard_hat_workers986.png</path><source><database>Unknown</database></source><size><width>415</width><height>416</height><depth>3</depth></size><segmented>0</segmented></annotation>

-<annotation>

<folder>Images</folder>

<filename>hard_hat_workers986.png</filename>

<path>C:\Users\admin\Desktop\Images\hard_hat_workers986.png</path>

-<source>

<database>Unknown</database>

</source>

-<size>

<width>415</width>
```

- Hardhat/ head's bounding box coordinates are written in .xml format as prediction.

***All The codes along with weights files is uploaded in the zip file, you can also try using weights at your end.**

E] References:

<https://github.com/AndrewCarterUK/pascal-voc-writer>