Started on	Thursday, 4 March 2021, 2:05 PM
State	Finished
Completed on	Thursday, 4 March 2021, 2:25 PM
Time taken	19 mins 22 secs
Grade	**7.50** out of 10.00 (**75**%)

Question **1**

Partially correct

Mark 0.50 out of 3.00

Which of the following statements are correct w.r.t. the issue of class imbalance and ways to mitigate it?

- [x] a. Focal loss tries to correct class imbalance by assigning lower weight to easier samples. A HIGHER gamma implies less weightage to simpler samples. ✔
- [x] b. Class imbalance may be corrected using hard negative mining ✔
- [x] c. Class imbalance in detection is caused by the relatively large number of NON-OBJECT classes ✖
- [ ] d. Focal loss tries to correct class imbalance by assigning lower weight to easier samples. A LOWER gamma implies less weightage to simpler samples.
- [ ] e. Class imbalance in detection is caused by the relatively large number of OBJECT classes

Your answer is partially correct.

You have correctly selected 2.
The correct answers are:
Class imbalance in detection is caused by the relatively large number of OBJECT classes,

Class imbalance may be corrected using hard negative mining,

Focal loss tries to correct class imbalance by assigning lower weight to easier samples. A HIGHER gamma implies less weightage to simpler samples.

Question **2**

Correct

Mark 4.00 out of 4.00

Which of the following techniques make Faster R-CNN improve its speed and accuracy of bounding boxes?

- [ ] a. Use of Region Proposal networks before convolutional layers for feature extraction
- [x] b. Use Convolutional layers before Region Proposal ✔
- [x] c. Use of shift and scale estimation of region proposals during bounding box regression. ✔
- [x] d. The possibility of end-to-end training of the complete network ✔
- [x] e. Use of fixed set of aspect ratios for the bounding box in region proposals ✔
- [ ] f. Use of arbitrary aspect ratios during region proposals

Your answer is correct.

The correct answers are:
Use Convolutional layers before Region Proposal,

Use of fixed set of aspect ratios for the bounding box in region proposals,

Use of shift and scale estimation of region proposals during bounding box regression., The possibility of end-to-end training of the complete network

Question **3**

Correct

Mark 3.00 out of 3.00

Which of the following are potential improvements that were proposed to improve Single-Stage bounding box detectors?

- [x] a. Predict corners of the bounding box instead of width and height of the bounding box ✔
- [x] b. Predict center region of the bounding box in addition to corners ✔
- [x] c. Predict the extreme points of an object instead of bounding box corners ✔
- [ ] d. Predict a convex hull of the object instead of rectangular bounding box.
- [ ] e. Predict the center and radius of the object instead of a bounding box.

Your answer is correct.

The correct answers are:
Predict corners of the bounding box instead of width and height of the bounding box,

Predict center region of the bounding box in addition to corners,

Predict the extreme points of an object instead of bounding box corners

◄ Lecture 14: (ODD) Quiz

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Lecture 15: (ODD) Quiz ►