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## Course outline

## About NPTEL

## How does an NPTEL online course work?

## Week 0

## Week 1

## Week 2

## Week 3

- Neural Networks: A Review - Part 1
- Neural Networks: A Review - Part 2
- Feedforward Neural Networks and Backpropagation - Part 1
- Feedforward Neural Networks and Backpropagation - Part 2
- Gradient Descent and Variants - Part 1
- Gradient Descent and Variants - Part 2
- Regularization in Neural Networks - Part 1
- Regularization in Neural Networks - Part 2
- Improving Training of Neural Networks - Part 1
- Improving Training of Neural Networks - Part 2
- Lecture Materials
- Practice: Week 3 : Assignment 3(Non-Graded)
- Quiz: Week 3: Assignment 3
- Week 3 Feedback Form : Deep Learning for Computer Vision

## Week 4

## Download Videos

## Text Transcripts

## Books

## Problem Solving Session - July 2024

## Thank you for taking the Week 3: Assignment 3.

## Week 3: Assignment 3

Your last recorded submission was on 2024-08-14, 02:02 IST

Due date: 2024-08-14, 23:59 IST.

## Instructions:

- Starter code for this assignment is provided in DL4CV-Prog-Assignment2-Week-3-2024.ipynb.
- Use Python 3.x to run the notebook. As instructed in the notebook, write your code only in between the lines "YOUR CODE STARTS HERE" and "YOUR CODE ENDS HERE".
- Do not change anything else in the code; if you do, the answers you are supposed to get at the end of this assignment might be wrong.
- Read documentation of each function carefully.
- All the best!

1) For this question, please see Question 1 in the IPython notebook (.ipynb file) provided alongside. Complete your implementation under the "YOUR CODE STARTS HERE" segment therein. What is mean of the sum of final\_output1 and final\_output2? (Select the closest value) 1 point

- ☐ 875
- ☒ 880
- ☐ 883
- ☐ 870

2) For this question, please see Question 2 in the IPython notebook (.ipynb file) provided alongside. Complete your implementation under the "YOUR CODE STARTS HERE" segment therein. What is the loss value calculated using the Custom Loss function? (Select the closest value) 1 point

- ☐ 1
- ☒ 2.5
- ☐ 1.5
- ☐ 2

3) For this question, please see Question 3 in the IPython notebook (.ipynb file) provided alongside. Complete your implementation under the "YOUR CODE STARTS HERE" segment therein. What is sum of the means of the gradients, grad\_M and grad\_v? (Select the closest value) 1 point

- ☐ 2
- ☐ 1.7
- ☐ 2.5
- ☒ 3

4) For this question, please see Question 4 in the IPython notebook (.ipynb file) provided alongside. Complete your implementation under the "YOUR CODE STARTS HERE" segment therein. What is mean of the output? (Select the closest value?) 1 point

- ☐ 1.6
- ☐ 2.2
- ☐ 3
- ☒ 1.8

5) For this question, please see Question 5 in the IPython notebook (.ipynb file) provided alongside. Complete your implementation under the "YOUR CODE STARTS HERE" segment therein. Report the final train accuracy (If you are not getting the exact number shown in options, please report the closest number). 1 point

- ☐ 100%
- ☐ 53%
- ☒ 61%
- ☐ 79%

6) For this question, please see Question 6 in the IPython notebook (.ipynb file) provided alongside. Complete your implementation under the "YOUR CODE STARTS HERE" segment therein. Report the final test accuracy (If you are not getting the exact number shown in options, please report the closest number). 1 point

- ☐ 30%
- ☐ 40%
- ☒ 15%
- ☐ 25%

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers