AdvancedLearningAlgorithms - WEEK 3 - NeuralNetworkTraining - QUIZ 3 (MachineLearningDevelopmentProcess)

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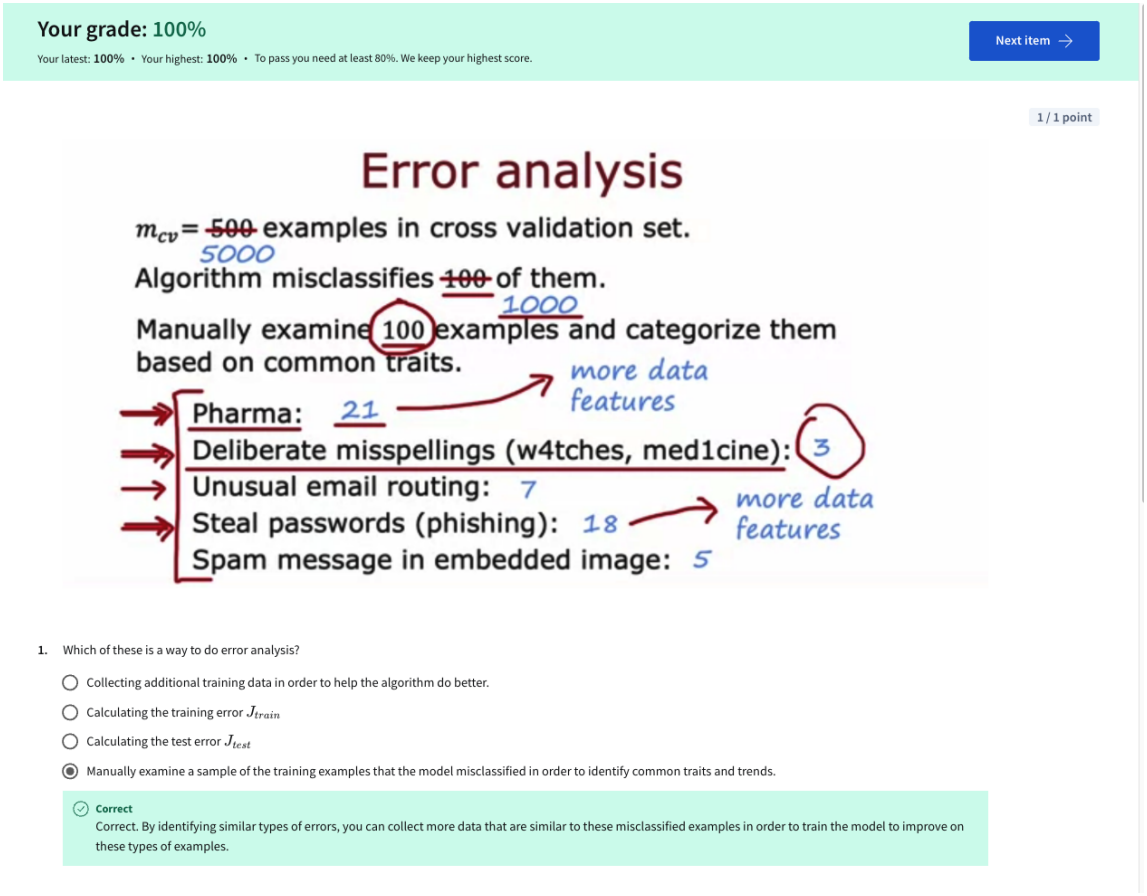
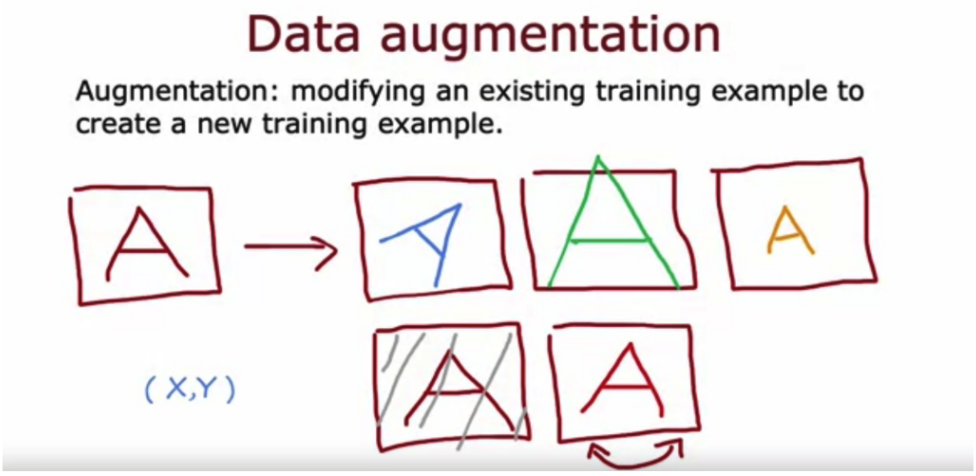


1. Which of these is a way to do error analysis?

- ○ Collecting additional training data in order to help the algorithm do better.
- ○ Calculating the training error J_{train}
- ○ Calculating the test error J_{test}
- ◉ Manually examine a sample of the training examples that the model misclassified in order to identify common traits and trends.

✓ **Correct**
Correct. By identifying similar types of errors, you can collect more data that are similar to these misclassified examples in order to train the model to improve on these types of examples.



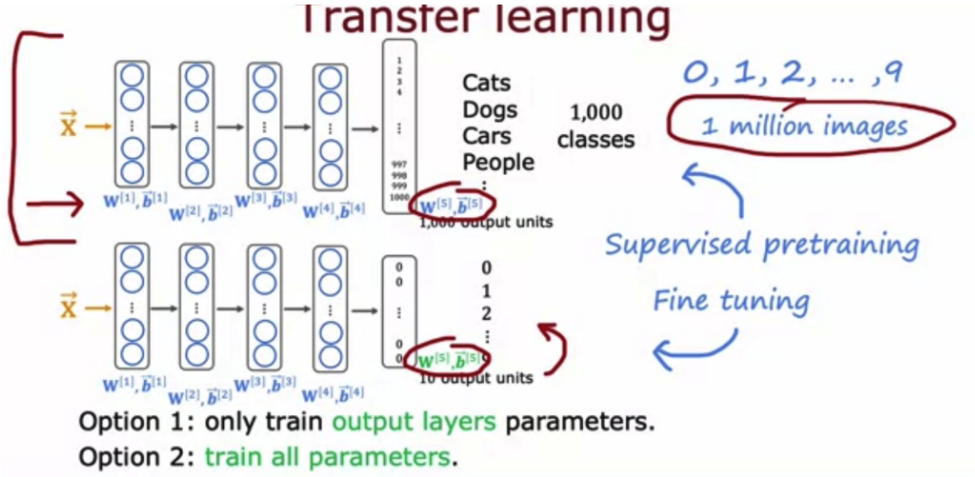
1 / 1 point

2. We sometimes take an existing training example and modify it (for example, by rotating an image slightly) to create a new example with the same label. What is this process called?

- ○ Machine learning diagnostic
- ○ Error analysis
- ◉ Data augmentation
- ○ Bias/variance analysis

Correct
Yes! Modifying existing data (such as images, or audio) is called data augmentation.

1 / 1 point



3. What are two possible ways to perform transfer learning? Hint: two of the four choices are correct.

- [ ] Given a dataset, pre-train and then further fine tune a neural network on the same dataset.
- [x] You can choose to train just the output layers' parameters and leave the other parameters of the model fixed.

Correct
Correct. The earlier layers of the model may be reusable as is, because they are identifying low level features that are relevant to your task.

- [ ] Download a pre-trained model and use it for prediction without modifying or re-training it.
- [x] You can choose to train all parameters of the model, including the output layers, as well as the earlier layers.

Correct
Correct. It may help to train all the layers of the model on your own training set. This may take more time compared to if you just trained the parameters of the output layers.