Quiz 3 - Results

Attempt 1 of 1

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Attempt Score **8.33 / 10 - 83.33 %**
Overall Grade (Highest Attempt) **8.33 / 10 - 83.33 %**

Question 1 **1 / 1 point**

When subclassing torch.utils.data.Dataset, which of these magic methods do you need to implement?

- ( ) __sizeof__
- (✓) __getitem__
- ( ) __hash__
- ( ) __eq__

Question 2 **1 / 1 point**

Which of these is NOT a major benefit of PyTorch?

- ( ) It allows computation to easily be moved to a GPU
- ( ) It includes many neural network components, so you don't have to implement them yourself
- ( ) It can compute gradients of the loss with respect to each contributing tensor
- (✓) It contains the largest collection of NLP datasets in one place on the internet

Question 3 **0.333 / 1 point**

Which of these models use feature vectors?

- [✗] Hidden Markov Model
- [✓] Maximum Entropy Markov Model
- [✓] Conditional Random Field

Question 4 **1 / 1 point**

Sentiment analysis is a structured prediction task.

- ( ) True
- (✓) False

Question 5 **1 / 1 point**

What is the primary purpose of the Viterbi algorithm in the context of Hidden Markov Models (HMMs)?

- ( ) To generate random sequences of observations based on the HMM parameters
- ( ) To estimate the transition and emission probabilities of the HMM
- (✓) To find the most likely sequence of hidden states given a sequence of observations
- ( ) To calculate the overall probability of a sequence of observations occurring under the HMM

Question 6 **0 / 1 point**

You want to implement a MLP consisting of several linear layers with ReLU nonlinearities, emphasizing conciseness and simplicity. Which of these classes should your model class subclass?

- ( ) nn.Linear
- ( ) nn.Sequential
- ( ) nn.LazyLinear
- (✗) nn.Module

Question 7 **1 / 1 point**

From which PyTorch module could you import things like loss functions and nonlinearities?

- ( ) torch.tensor
- (✓) torch.nn
- ( ) torch.optim
- ( ) torch.autograd

Question 8 **1 / 1 point**

Which of these is assumed for a Hidden Markov Model?

- ( ) The observed output at time t depends on both the observed output at time t-1 and the hidden state at time t
- ( ) The hidden state at time t depends only on the observed output at time t
- (✓) The hidden state at time t depends only on the hidden state at time t-1
- ( ) The observed output at time t depends only on the observed output at time t-1

Question 9 **1 / 1 point**

How do you move a tensor to a GPU in PyTorch?

- ( ) tensor.device('nvidia')
- ( ) tensor.gpu()
- (✓) tensor.to('cuda')
- ( ) Use the torch.with_grad context-manager

Question 10 **1 / 1 point**

In the training loop, optimizer.zero_grad() should go after loss.backward() and before optimizer.step().

- ( ) True
- (✓) False

Done