Deeplearning lab(27-01-2025)

Panther& Ds

Points: 10/10 Time: 15:52

1. Name *

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2. registration *

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✓ **Correct** 1/1 Points

3. **D. What is the purpose of dropout in deep learning?** *

- A) To increase the number of neurons in a layer
- B) To randomly deactivate some neurons during training to prevent overfitting
- C) To increase the learning rate of the model
- D) To reduce the batch size

✓ **Correct** 1/1 Points

4. **C. Which of the following is NOT a technique to prevent overfitting?** *

- A) Adding more training data
- B) Using dropout layers
- C) Increasing the number of parameters in the model
- D) Using L1 or L2 regularization

✓ **Correct** 1/1 Points

5. **A) What is overfitting in deep learning?** *

- A) When the model performs well on training data but poorly on unseen data
- B) When the model performs well on both training and test data
- C) When the model underperforms on training data
- D) When the model does not train at all

✓ **Correct** 1/1 Points

6. **I. What is early stopping in deep learning?** *

- A) Stopping the training process before the model starts overfitting
- B) Reducing the number of layers in the network
- C) Using a small batch size to improve generalization
- D) Increasing the number of epochs

✓ **Correct** 1/1 Points

7. **L. Which of the following is a benefit of using batch normalization?** *

- (●) A) Reduces internal covariate shift and helps with regularization
- ( ) B) Increases the learning rate
- ( ) C) Reduces the need for activation functions
- ( ) D) Removes the need for training data

✓ **Correct** 1/1 Points

8. **E. How does L2 regularization (Ridge Regression) help prevent overfitting?** *

- ( ) A) It removes unnecessary layers from the model
- (●) B) It penalizes large weights, forcing the model to learn simpler patterns
- ( ) C) It reduces the batch size to improve generalization
- ( ) D) It increases the complexity of the neural network

✓ **Correct** 1/1 Points

9. **F. Which hyperparameter is commonly tuned to prevent overfitting?** *

- ( ) A) Learning rate
- ( ) B) Number of layers
- ( ) C) Dropout rate

D) All of the above

✓ **Correct** 1/1 Points

10. **How does data augmentation help in preventing overfitting?** *

- [x] A) By artificially increasing the size of the training dataset with variations
- [ ] B) By reducing the learning rate of the optimizer
- [ ] C) By removing irrelevant features from the dataset
- [ ] D) By reducing the number of layers in the model

✓ **Correct** 1/1 Points

11. **G. What is the role of cross-validation in hyperparameter tuning?** *

- [ ] A) To improve the training speed of the model
- [x] B) To evaluate the model's performance on different subsets of data
- [ ] C) To increase the number of training samples
- [ ] D) To reduce the number of hyperparameters in the model

✓ **Correct** 1/1 Points

12. **B. Which of the following is a sign of overfitting?** *

- [ ] A) High accuracy on both training and test sets
- [ ] B) Low accuracy on both training and test sets

C) High accuracy on training but low accuracy on validation data

D) Low accuracy on training but high accuracy on validation data

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