38 Keras interview questions to hire top ML engineers

Questions

1. Can you explain what Keras is and its relationship with TensorFlow?

2. What are the main advantages of using Keras for deep learning projects?

3. How do you create a simple sequential model in Keras?

4. What is the difference between model.add() and model.compile() in Keras?

5. Can you describe the purpose of activation functions in Keras and name a few common ones?

6. How do you handle overfitting in Keras models?

7. What is the role of optimizers in Keras and can you name a few?

8. Explain the concept of callbacks in Keras and provide an example of when you might use one.

9. How do you save and load a Keras model?

10. What is the difference between Keras functional API and sequential API?

11. Can you explain the concept of a 'layer' in Keras and give some examples of common layer types?

12. How would you handle imbalanced datasets in Keras?

13. What is the purpose of the 'validation_split' parameter in Keras' fit() method?

14. Explain the concept of early stopping in Keras and why it's useful.

15. How would you implement transfer learning using a pre-trained model in Keras?

16. What is the difference between model.fit() and model.fit_generator() in Keras?

17. How would you implement a custom loss function in Keras?

18. Explain the concept of a custom layer in Keras and when you might use one.

19. How would you use data augmentation in Keras to improve model performance?

20. Explain the difference between batch normalization and layer normalization in Keras.

21. How can you implement a multi-input model using the Keras functional API?

22. What strategies would you use to debug a Keras model that's not learning?

23. How do you implement a custom metric in Keras?

24. Explain the concept of model checkpointing in Keras and how to implement it.

25. How would you handle time series data preprocessing for a Keras LSTM model?

26. What's the purpose of the 'class_weight' parameter in Keras' fit() method?

27. How can you visualize the training process of a Keras model?

28. Explain how to use Keras' ImageDataGenerator for real-time data augmentation.

29. How would you implement a custom training loop in Keras?

30. What's the difference between model.predict() and model.evaluate() in Keras?

31. What are the different types of layers available in Keras?

32. How would you explain the use of the Dense layer in Keras?

33. Can you describe what a Convolutional layer does in a neural network?

34. What is the purpose of Pooling layers in Keras?

35. How do Recurrent layers differ from other layer types in Keras, and when would you use them?

36. What is the role of Normalization layers in Keras?

37. Can you explain the concept of an Embedding layer in Keras and its applications?

38. What are Dropout layers and why are they used in Keras models?