1. **K-Nearest Neighbors (KNN):**
   - How does the KNN algorithm classify a new data point?
   - What is the significance of the "K" value in KNN?
   - How does KNN handle categorical features?
   - Can KNN be computationally expensive for large datasets?

2**. Naive Bayes:**
   - What makes Naive Bayes "naive" in its assumptions?
   - How does Naive Bayes handle missing data?
   - Explain the concept of prior and posterior probabilities in the context of Naive Bayes.
   - When is Naive Bayes particularly suitable for classification tasks?

3. **Gradient Descent:**
   - What is the main goal of the gradient descent optimization algorithm?
   - Differentiate between batch gradient descent and stochastic gradient descent.
   - How does learning rate impact the convergence of gradient descent?
   - Discuss the concept of local minima in the context of gradient descent.

4. **Linear Regression**:
   - What is the fundamental equation of a linear regression model?
   - Explain the terms "slope" and "intercept" in the context of linear regression.
   - How is the cost function used in linear regression optimization?
   - What assumptions does linear regression make about the data?

5. **Neural Network:**
   - What distinguishes a neural network from traditional machine learning models?
   - Define the terms "input layer," "hidden layer," and "output layer" in a neural network.
   - How does backpropagation work in training a neural network?
   - Discuss the concept of overfitting in neural networks.

6. **Convolutional Neural Network (CNN):**
   - What is the primary advantage of using convolutional layers in CNNs for image processing?
   - Explain the purpose of pooling layers in a CNN.
   - How do CNNs handle spatial hierarchies in image data?
   - Discuss the concept of weight sharing in convolutional layers.