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PRACTICE WITH 40
DATA SCIENCE INTERVIEW QUESTIONS
2024

1. What is the difference between a population and a sample in statistics?
2. How do you handle imbalanced data sets in classification problems?
3. What are some of the advantages and disadvantages of linear regression?
4. Explain the concept of regularization and how it helps to prevent overfitting.
5. What are some of the methods that you use to select the optimal number of clusters in k-means clustering?
6. How do you implement gradient descent and what are its variants?
7. What are some of the applications of natural language processing (NLP) in data science?
8. What are some of the common deep learning frameworks and libraries that you use or have used?
9. How do you perform feature engineering and feature selection in your data science projects?
10. What are some of the tools and platforms that you use to deploy and monitor your data science models?

1. **How do you handle multicollinearity in linear regression?**
2. **What are some of the advantages and disadvantages of neural networks?**
3. **What are some of the common types of recommender systems and how do they work?**
4. **How do you implement a KNN classifier from scratch in Python?**
5. **What are some of the differences between SQL and NoSQL databases?**
6. **How do you perform sentiment analysis on text data?**
7. **What are some of the methods that you use to deal with class imbalance in classification problems?**
8. **How do you optimize the hyperparameters of a machine learning model?**
9. **What are some of the applications of computer vision in data science?**
10. **How do you perform anomaly detection on time series data?**

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1. How do you handle skewed data in your data analysis?
2. What are some of the advantages and disadvantages of KNN algorithm?
3. What are some of the common types of activation functions and how do they affect the output of a neural network?
4. How do you implement a linear regression model from scratch in Python?
5. What are some of the differences between Hadoop and Spark frameworks?
6. How do you perform text summarization on text data?
7. What are some of the methods that you use to deal with noisy data in your datasets?
8. How do you tune the learning rate of a machine learning model?
9. What are some of the applications of image processing in data science?
10. How do you perform web scraping on data?

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