

# 100+ MACHINE LEARNING AND MORE INTERVIEW

Questions...

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# MACHINE LEARNING

What are the steps involved in data wrangling and data cleaning?

How to deal with unbalanced binary classification?

What is the difference between a box plot and a histogram?

Describe different regularization methods, such as L1 and L2 regularization?

What is cross-validation?

How to define/select metrics?

Explain what precision and recall are?

Explain what a false positive and a false negative are. Why is it important these from each other?





# MACHINE LEARNING

What is the difference between supervised learning and unsupervised learning?

When would you use random forests Vs SVM and why?

Do you think 50 small decision trees are better than a large one? Why?

Why is mean square error a bad measure of model performance?

Why is dimension reduction important?

What is principal component analysis?

Why is Naive Bayes so bad?

What are the assumptions required for linear regression?  
What if some of these assumptions are violated?





# MACHINE LEARNING

What is collinearity and what to do with it?  
How to remove multicollinearity?

How to check if the regression model fits the data well?

Is it beneficial to perform dimensionality reduction before fitting an SVM? Why or why not?

Explain the steps in making a decision tree/random forest?

What is a decision tree?

What is a random forest? Why is it good?

What is a kernel? Explain the kernel trick

How can you avoid the overfitting/underfitting in your model?





# MACHINE LEARNING

What are the feature selection methods used to select the right variables?

What is Linear Regression/ logistic regression and their Drawbacks?

What is the difference between Regression and classification ML techniques?

During analysis, how do you treat missing values?

What is Ensemble Learning?

What is the difference between ML and DL?

What are Artificial Neural Networks?

How will you define the number of clusters in a clustering algorithm?





# MACHINE LEARNING

What Will Happen If the Learning Rate Is Set inaccurately (Too Low or Too High)?

What Is the Difference Between Epoch, Batch, and Iteration in Deep Learning?

What Is Pooling on CNN, and How Does It Work? and What are Recurrent Neural Networks(RNNs)?

Explain how Gradient Descent works and its variants?

How Are Weights Initialized in a Network?

What Is the Cost Function and hyperparameters?

What Are the Different Layers on CNN?

What is exploding gradients/ vanishing gradients? and What is Back Propagation and Explain it's Working.





# MATHEMATICS

What is the Central Limit Theorem? Explain it. Why is it important?

Is mean imputation of missing data acceptable practice? Why or why not?

How do you handle missing data? What imputation techniques do you recommend?

What is root cause analysis? How to identify a cause vs. a correlation?

Walk through the probability fundamentals

Describe Markov chains? What is the statistical power?

How can you tell if a given coin is biased?

What do you understand by the term Normal Distribution?





# MATHEMATICS

What is the difference between Point Estimates and Confidence Interval?

What Are the Types of Biases That Can Occur During Sampling?

What is TF/IDF vectorization? and what are word embeddings?

Why we generally use Softmax non-linearity function as last operation in-network?

What is the goal of A/B Testing?

What is p-value?

Explain how a ROC curve works?

What do you understand by the term Normal Distribution?





# DATA ANALYSIS

Why we generally use Softmax non-linearity function as last operation in-network?

How does data cleaning plays a vital role in the analysis?

Differentiate between univariate, bivariate and multivariate analysis.

Can you cite some examples where a false positive is important than a false negative?

What is Cluster Sampling?

Explain cross-validation.

Explain how a ROC curve works?

What are categorical variables?



# RESOURCES

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- Find all questions and answers here