

1. Give some situations where you will use an SVM over a RandomForest Machine Learning algorithm and vice-versa. (<https://datascience.stackexchange.com/questions/6838/when-to-use-random-forest-over-svm-and-vice-versa>)
2. What is convex hull ?([https://en.wikipedia.org/wiki/Convex\\_hull](https://en.wikipedia.org/wiki/Convex_hull))
3. What is a large margin classifier?
4. Why SVM is an example of a large margin classifier?
5. SVM being a large margin classifier, is it influenced by outliers? (Yes, if C is large, otherwise not)
6. What is the role of C in SVM?
7. In SVM, what is the angle between the decision boundary and theta?
8. What is the mathematical intuition of a large margin classifier?
9. What is a kernel in SVM? Why do we use kernels in SVM?
10. What is a similarity function in SVM? Why it is named so?
11. How are the landmarks initially chosen in an SVM? How many and where?
12. Can we apply the kernel trick to logistic regression? Why is it not used in practice then?
13. What is the difference between logistic regression and SVM without a kernel? (Only in implementation – one is much more efficient and has good optimization packages)
14. How does the SVM parameter C affect the bias/variance trade off? (Remember  $C = 1/\lambda$ ;  $\lambda$  increases means variance decreases)
15. How does the SVM kernel parameter  $\sigma^2$  affect the bias/variance trade off?
16. Can any similarity function be used for SVM? (No, have to satisfy Mercer's theorem)
17. Logistic regression vs. SVMs: When to use which one? ( Let's say n and m are the number of features and training samples respectively. If n is large relative to m use log. Reg. or SVM with linear kernel, If n is small and m is intermediate, SVM with Gaussian kernel, If n is small and m is massive, Create or add more features then use log. Reg. or SVM without a kernel)
18. What is the difference between supervised and unsupervised machine learning?

#### External Resources:

1. <https://www.analyticsvidhya.com/blog/2017/10/svm-skilltest/>

**\*\*If you face any new Interview questions please put in comments ,we will work it out\*\***