

- SVM try to maximize the margin between the closest support vectors whereas logistic regression maximize the posterior class probability
- SVM is deterministic (but we can use Platts model for probability score) while LR is probabilistic.
- For the kernel space, SVM is faster

S.No.	Logistic Regression	Support Vector Machine
1.	It is an algorithm used for solving classification problems.	It is a model used for both classification and regression.
2.	It is not used to find the best margin, instead, it can have different decision boundaries with different weights that are near the optimal point.	it tries to find the "best" margin (distance between the line and the support vectors) that separates the classes and thus reduces the risk of error on the data.
3.	It works with already identified identified independent variable.	It works well with unstructured and semi-structured data like text and images.
4.	It is based on statistical approach.	It is based on geometrical properties of the data.
5.	It is vulnerable to overfitting.	The risk of overfitting is less in SVM.
6.	Problems to apply logistic regression algorithm. <div> 1. Cancer Detection: It can be used to detect if a patient has cancer(1) or not(0) 2. Test Score: Predict if the student is passed(1) or not(0). 3. Marketing: Predict if a customer will purchase a product(1) or not(0). </div>	Problems that can be solved using SVM <div> 1. Image Classification 2. Recognizing handwriting 3. Cancer Detection </div>