

機器學習

Support Vector Machine

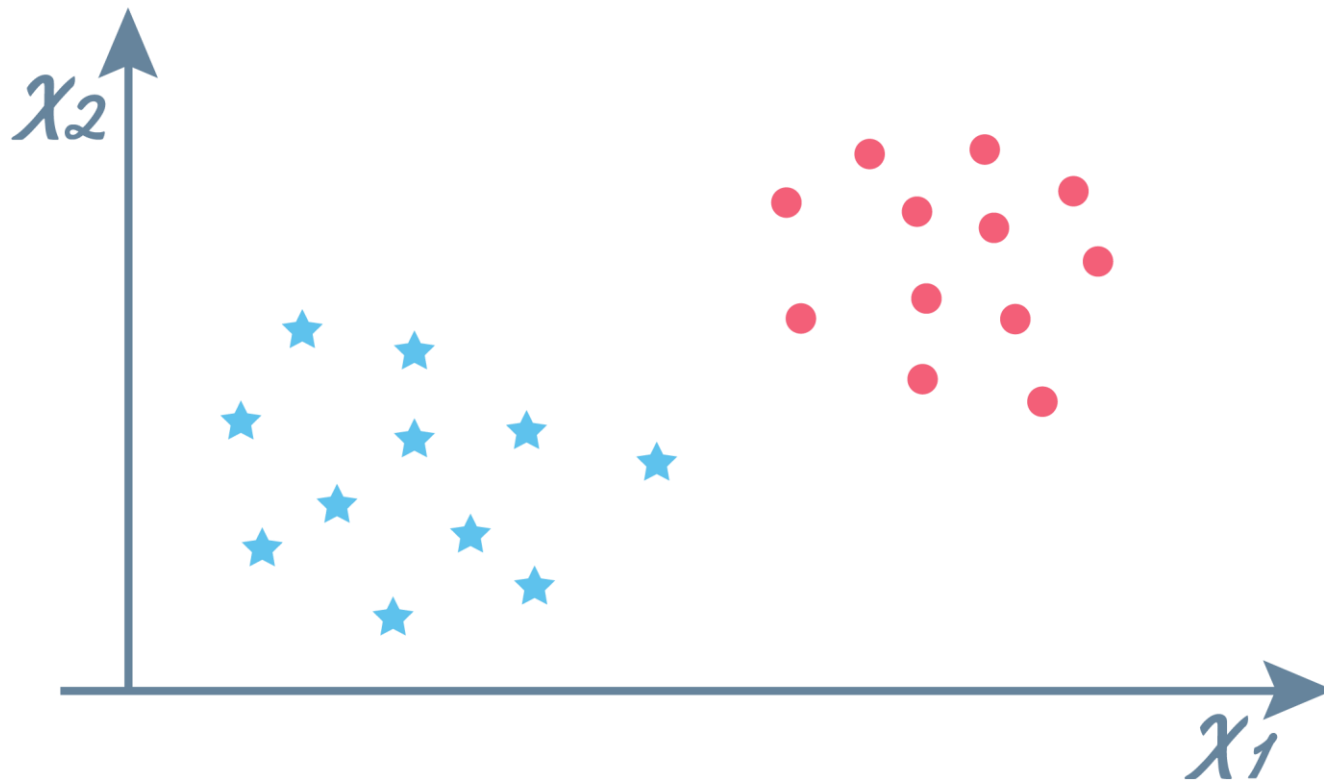
授課老師：林彥廷

支持向量機

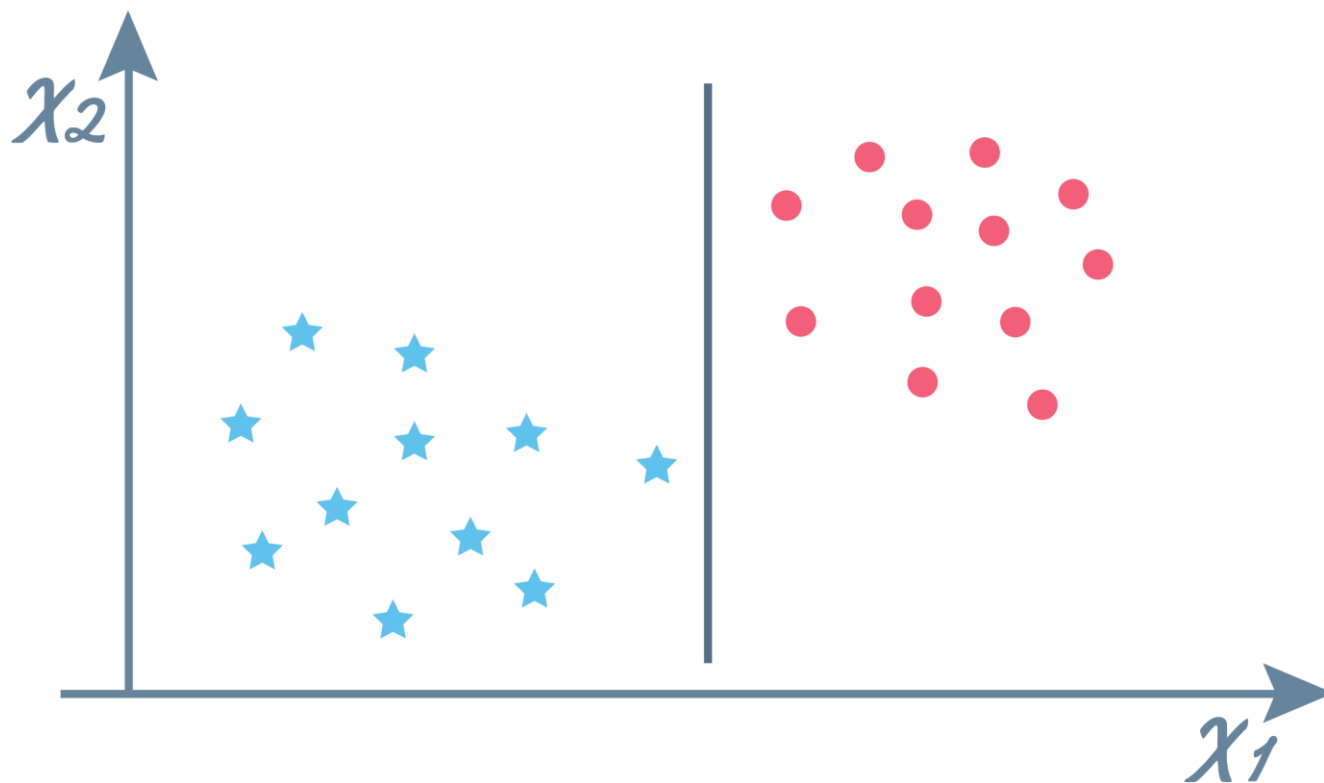
Support Vector Machine

- SVM是在分類與迴歸分析中分析資料的監督式學習模型與相關的學習演算法。
- SVM最主要的概念，就是希望可以在一個由不同類別混合而成的資料集中，依據一些特徵(feature)，找到一個最佳的超平面(hyper plane)將不同類別的資料分開來。所謂最佳的超平面就是其距離兩個類別的邊界可以達到最大，而最靠近邊界的這些樣本點提供SVM最多的分類資訊，就叫做支持向量(Support Vector)。

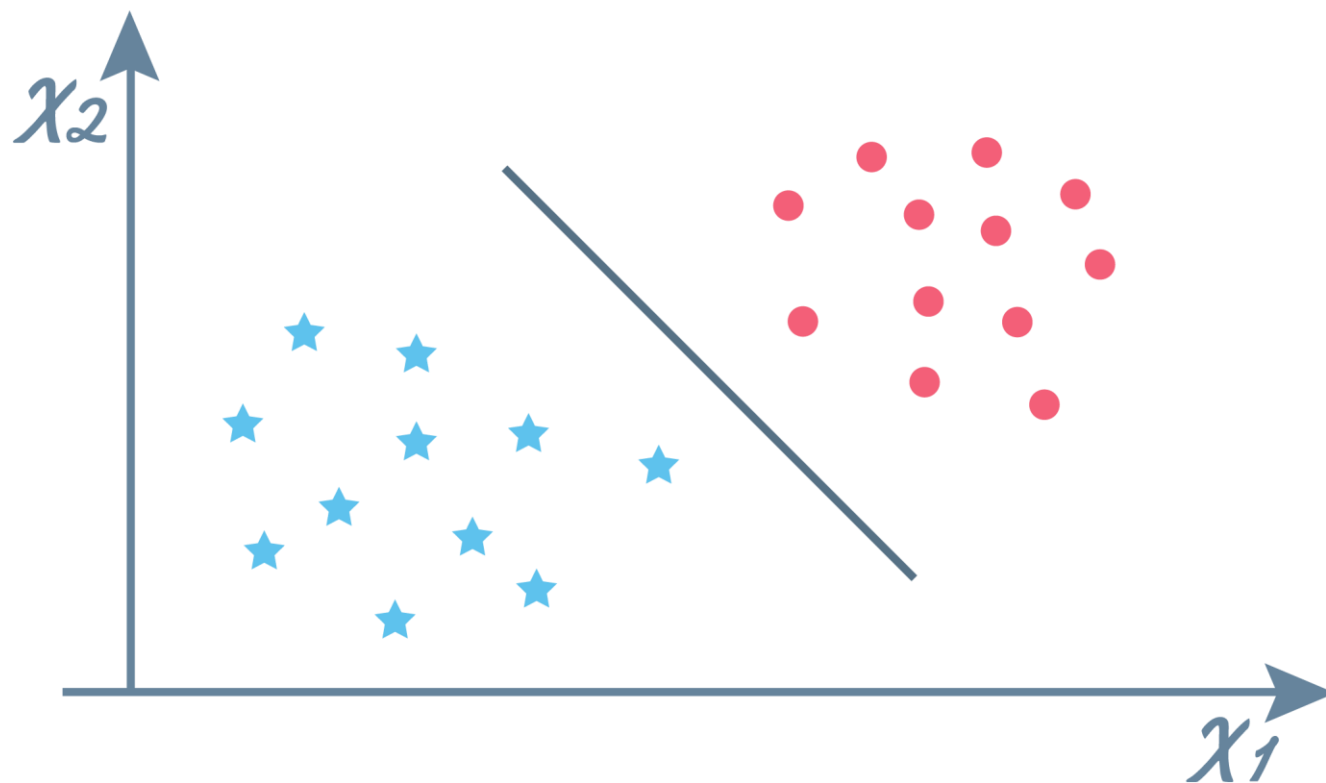
How to separate these points?



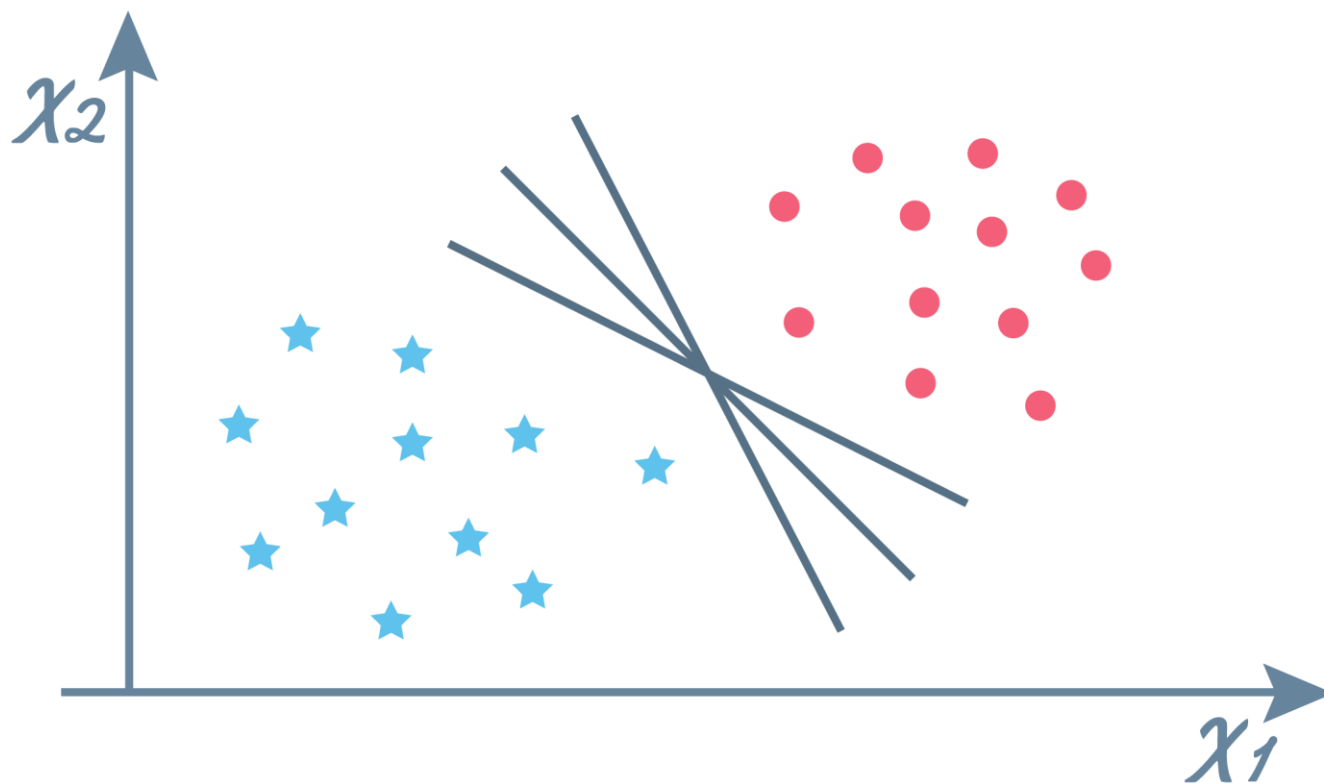
SVM



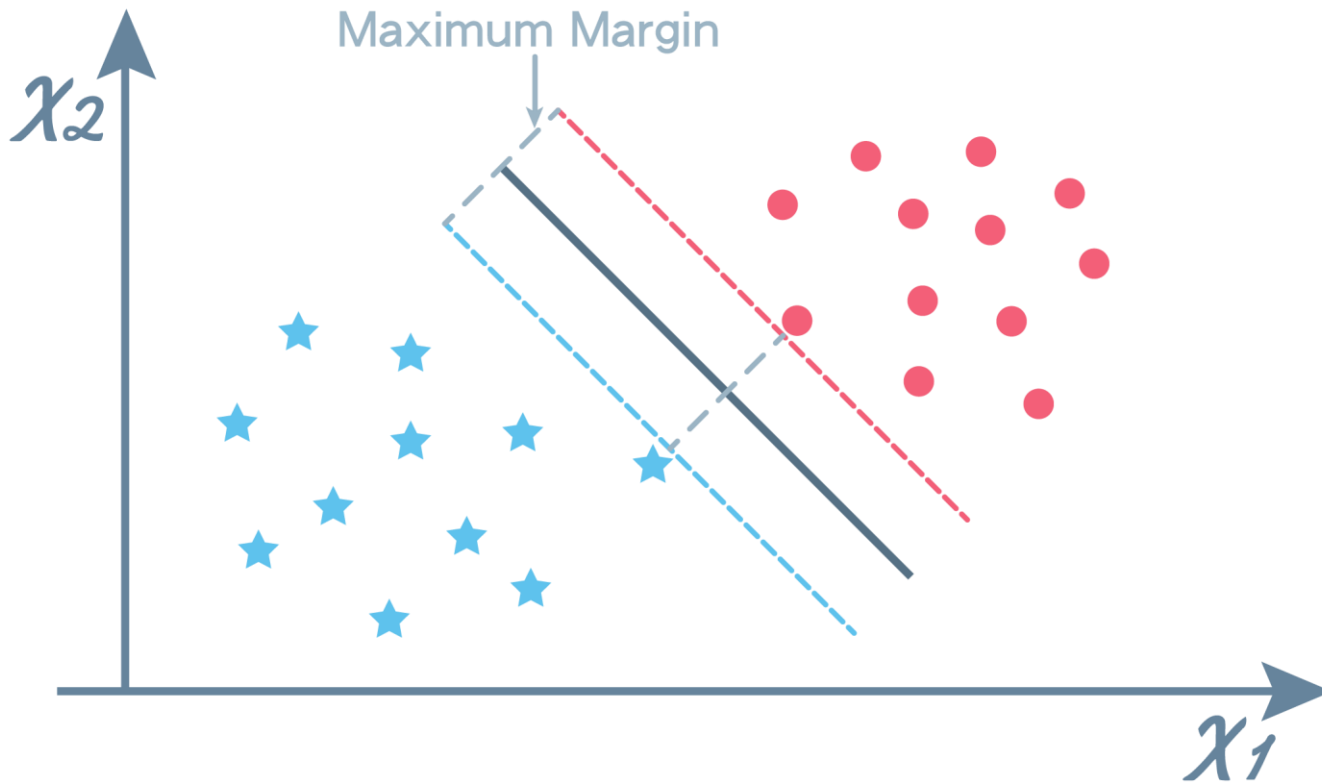
SVM



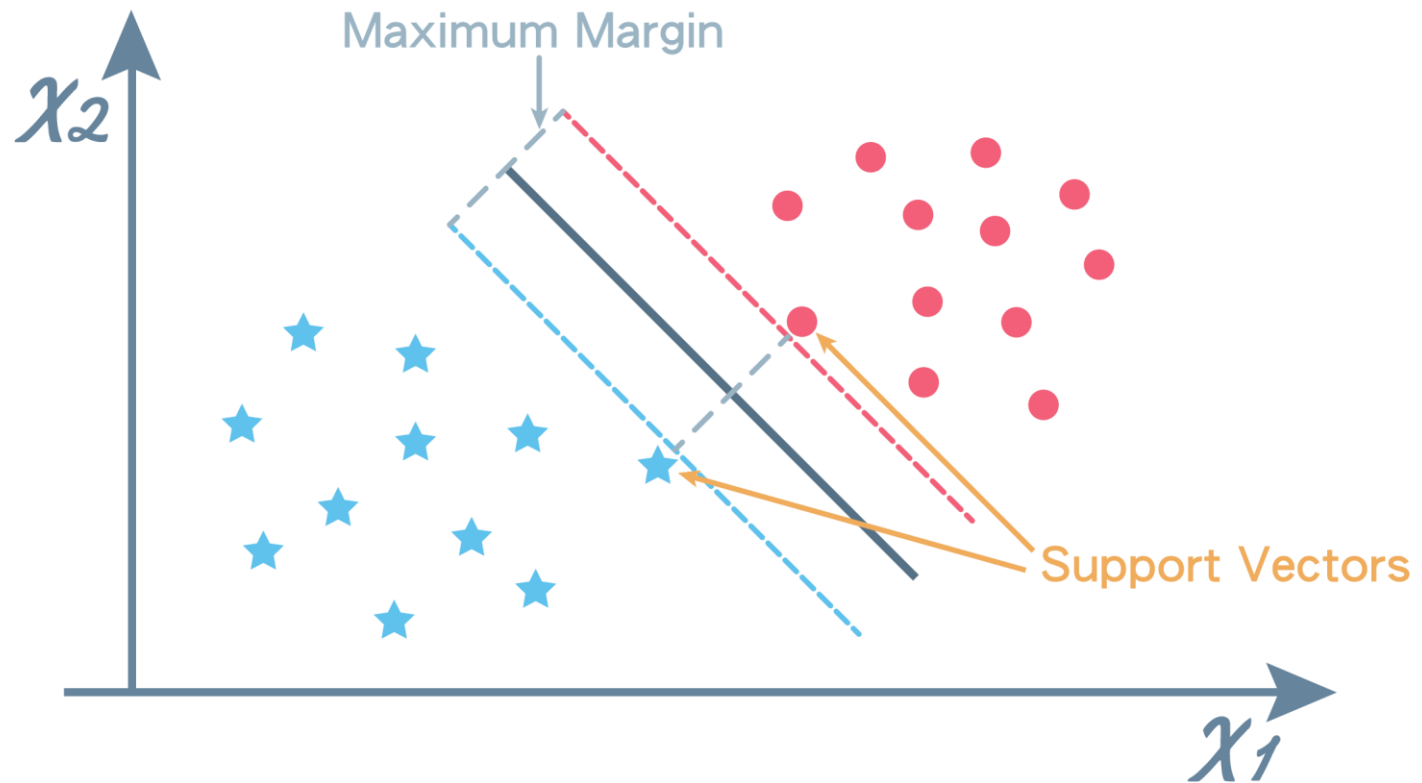
SVM



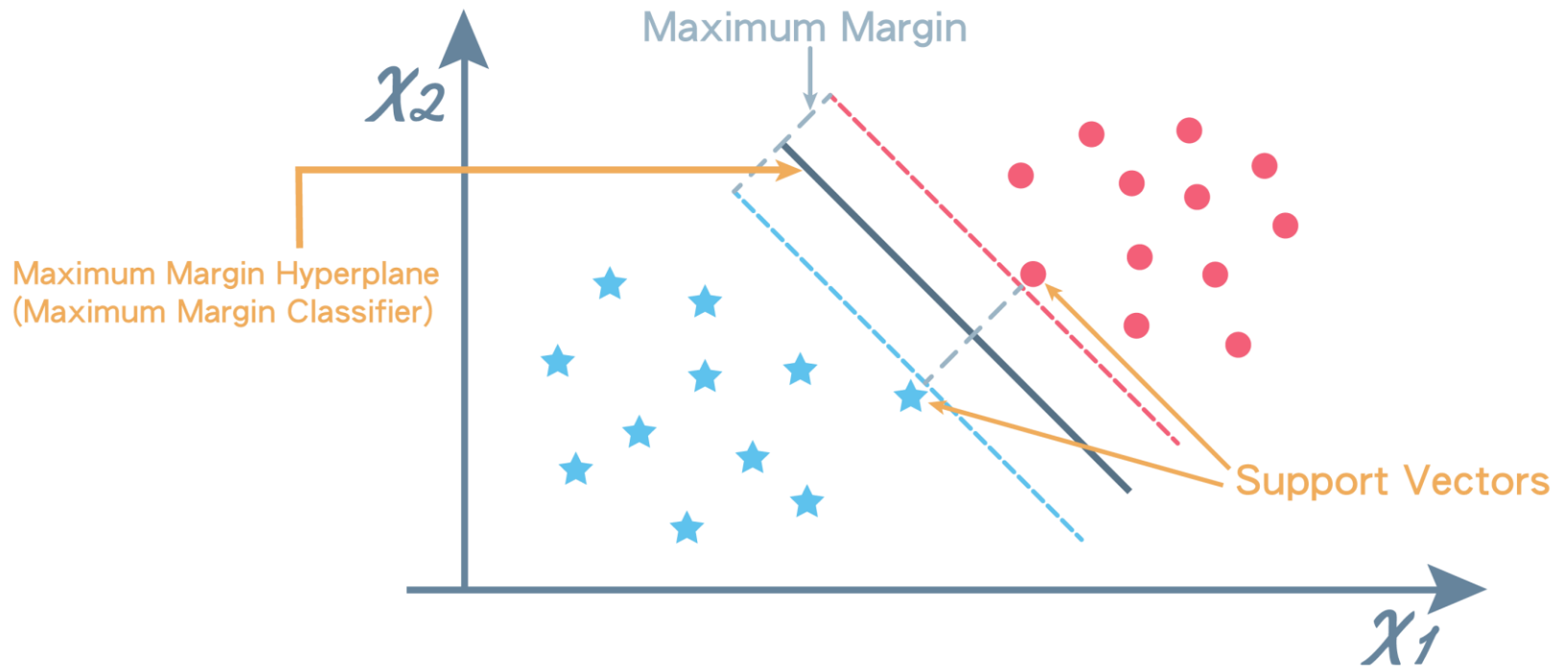
Maximum Margin



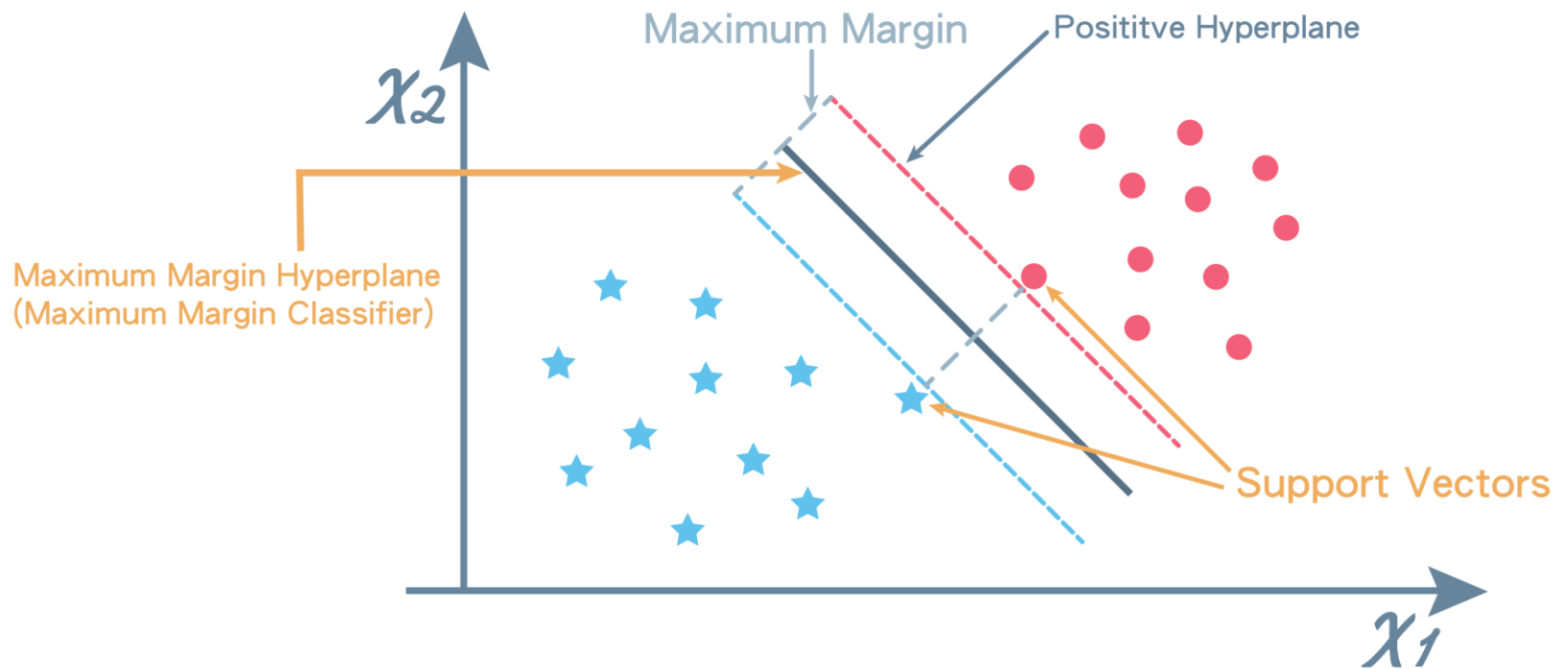
Support Vectors



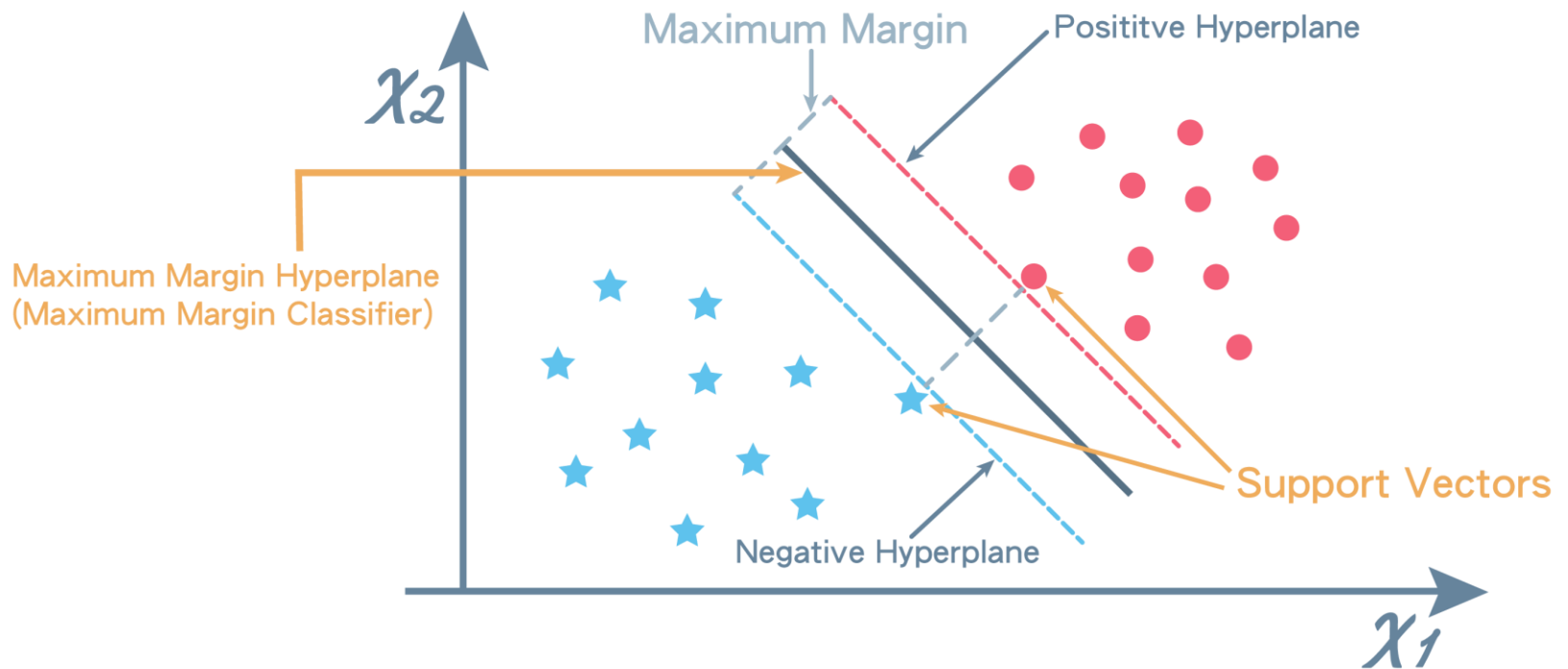
Hyperplane



Hyperplane



Hyperplane

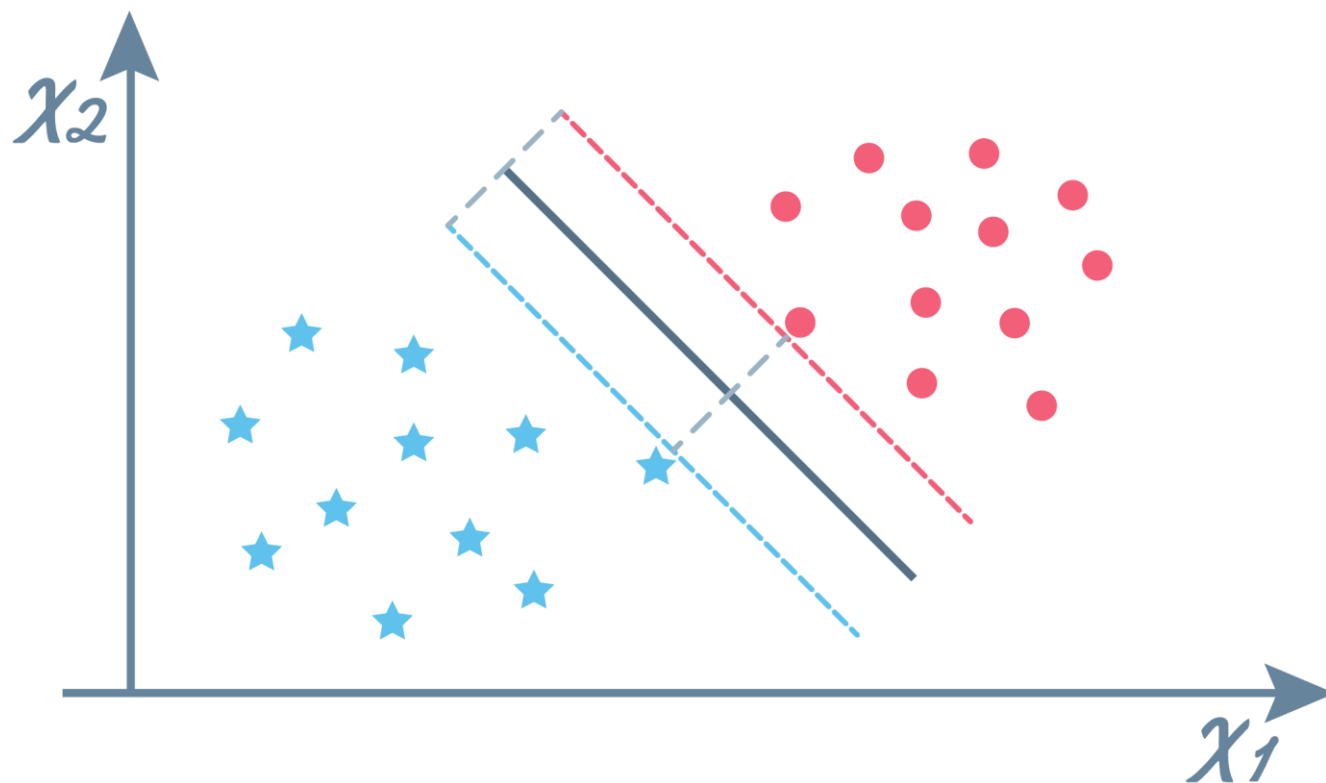


**What's So Special About
SVMs?**

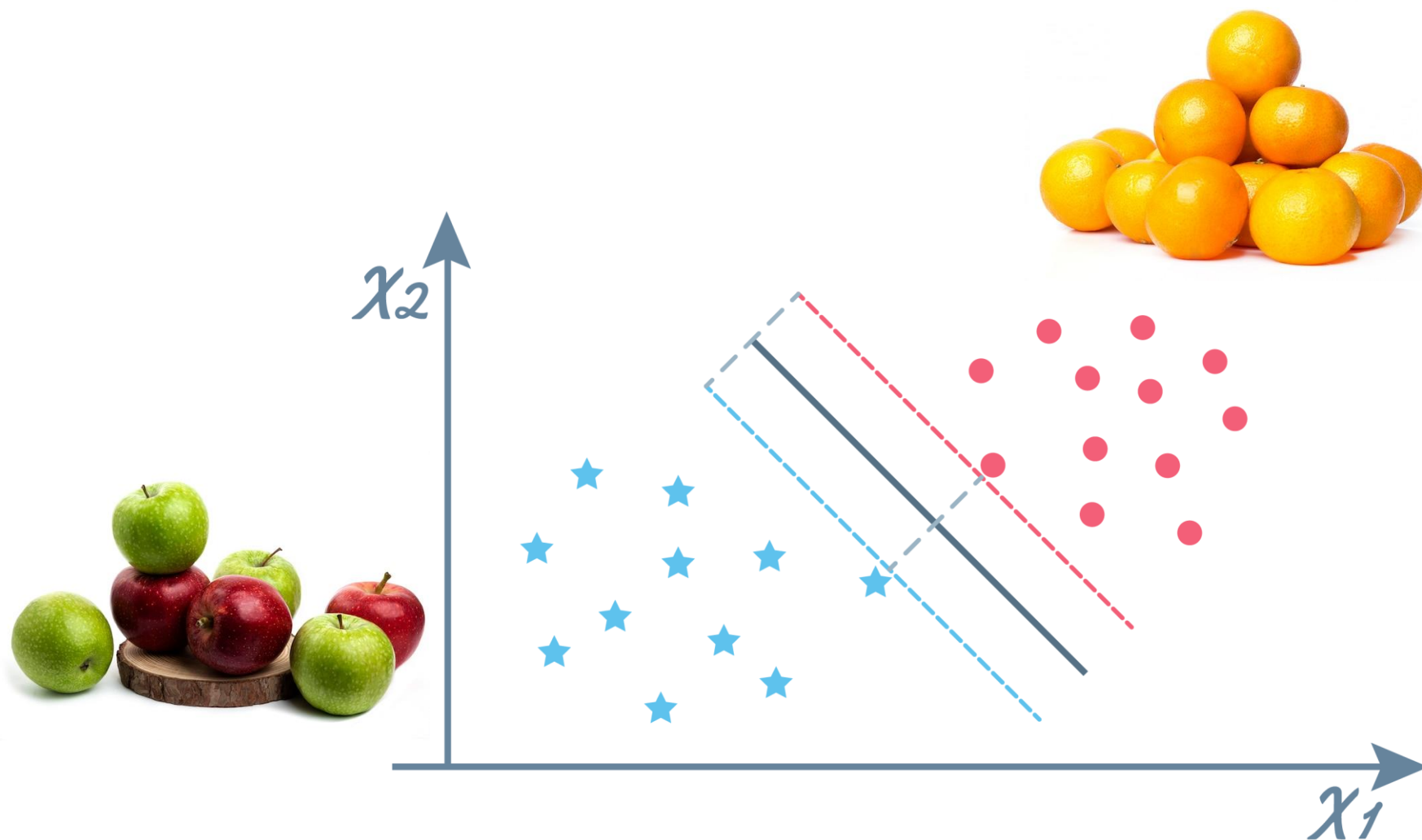
What's So Special About SVM?



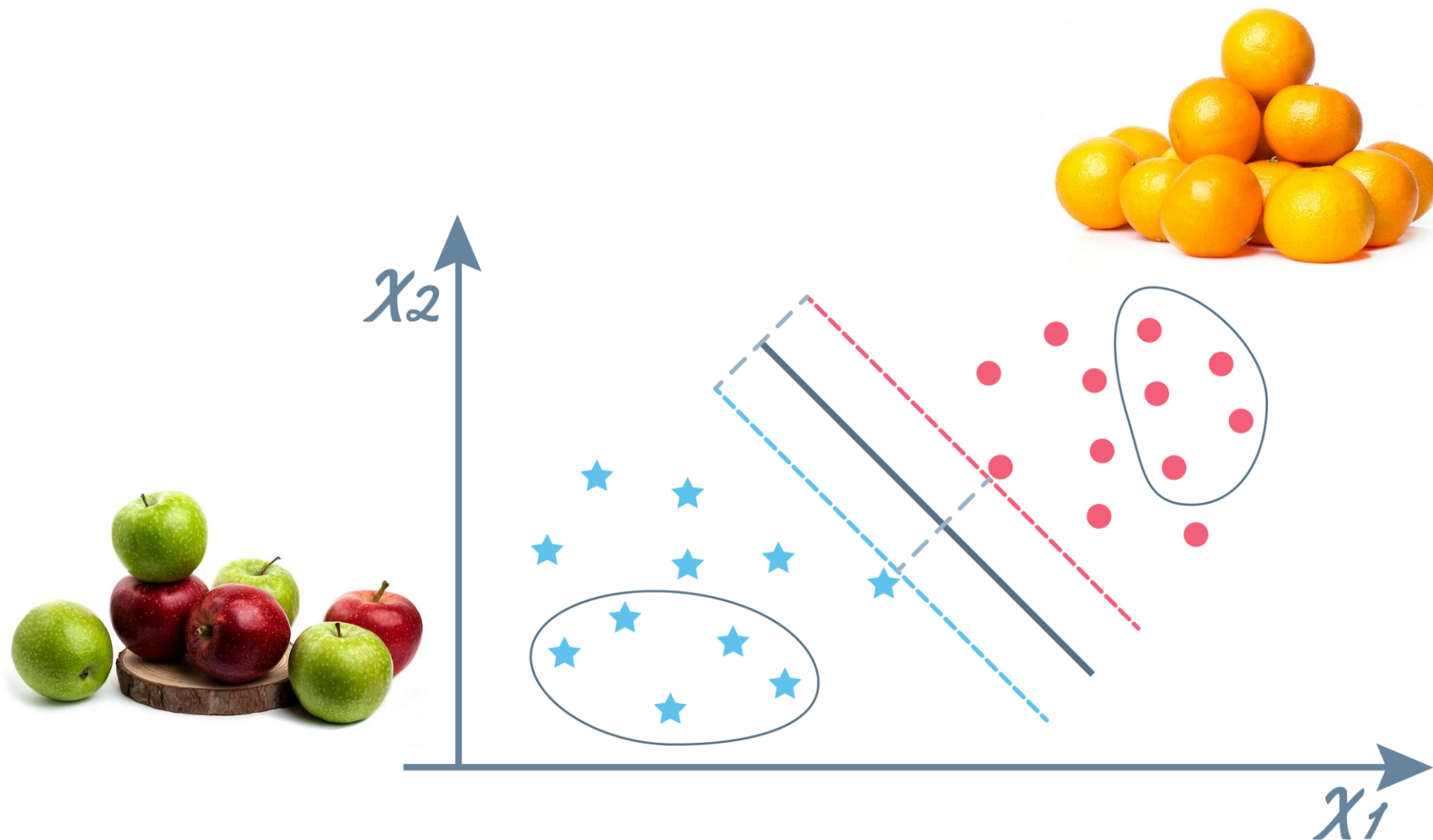
What's So Special About SVM?



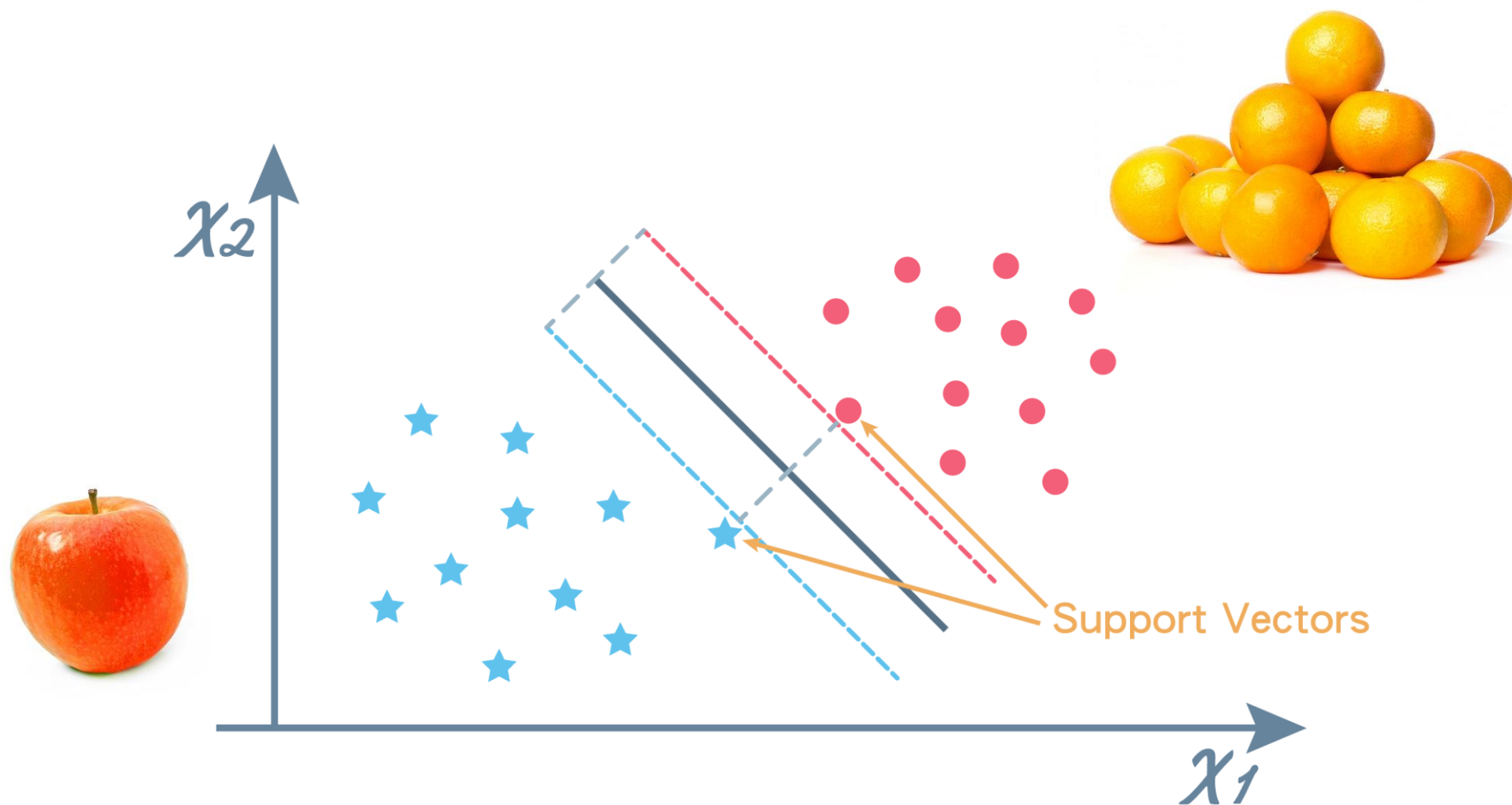
What's So Special About SVM?



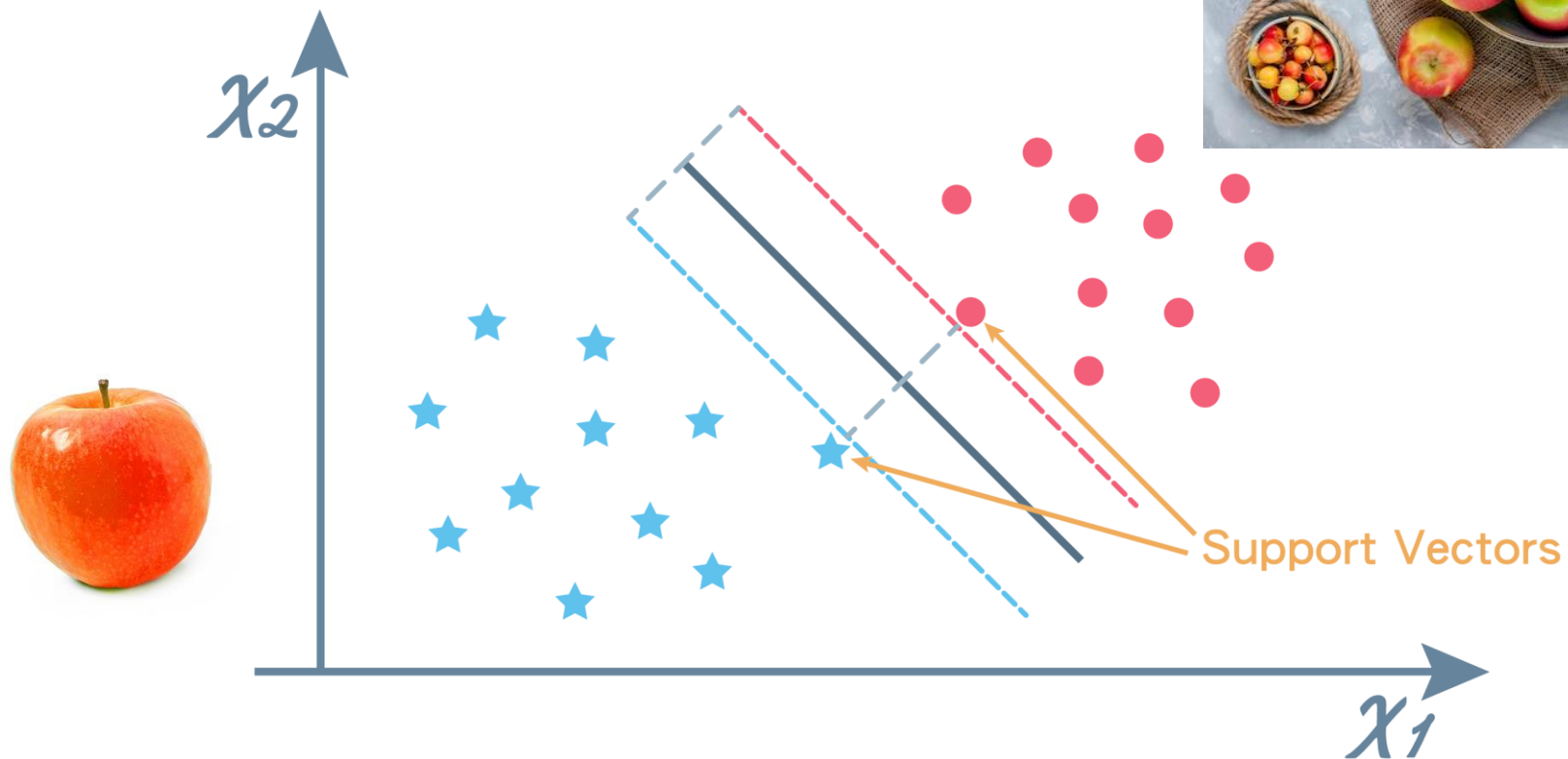
What's So Special About SVM?



What's So Special About SVM?



What's So Special About SVM?



THE END

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