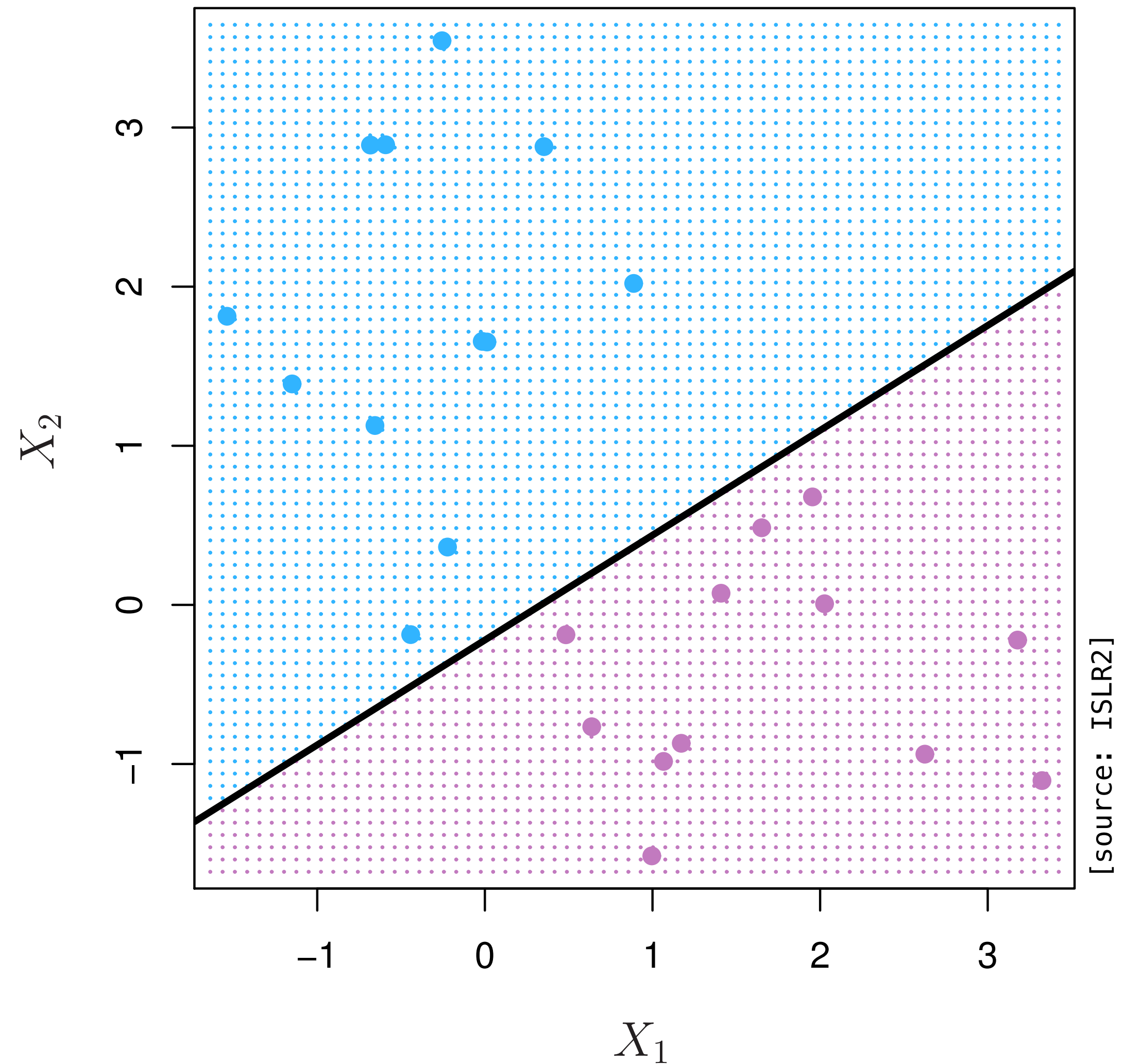
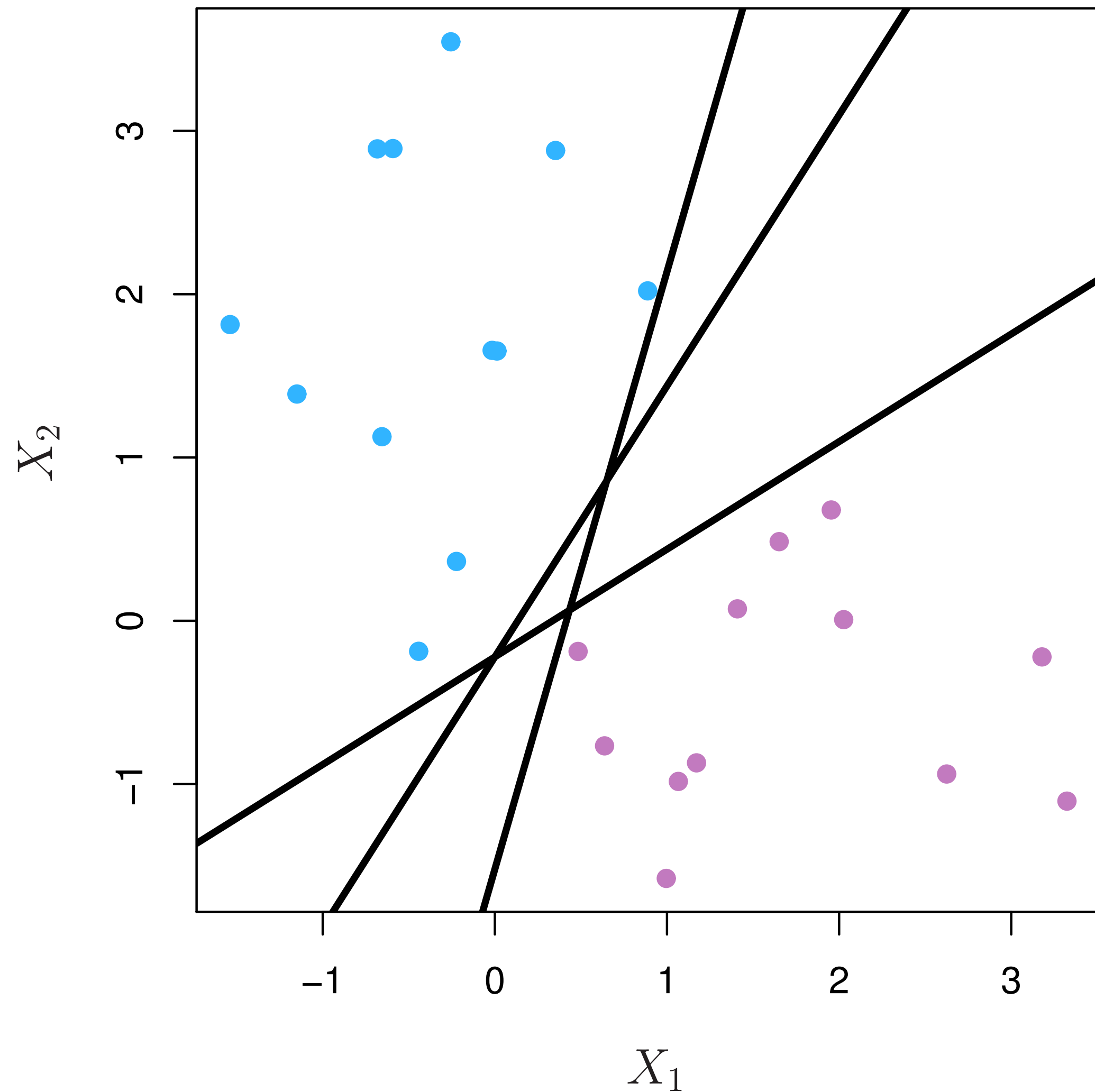
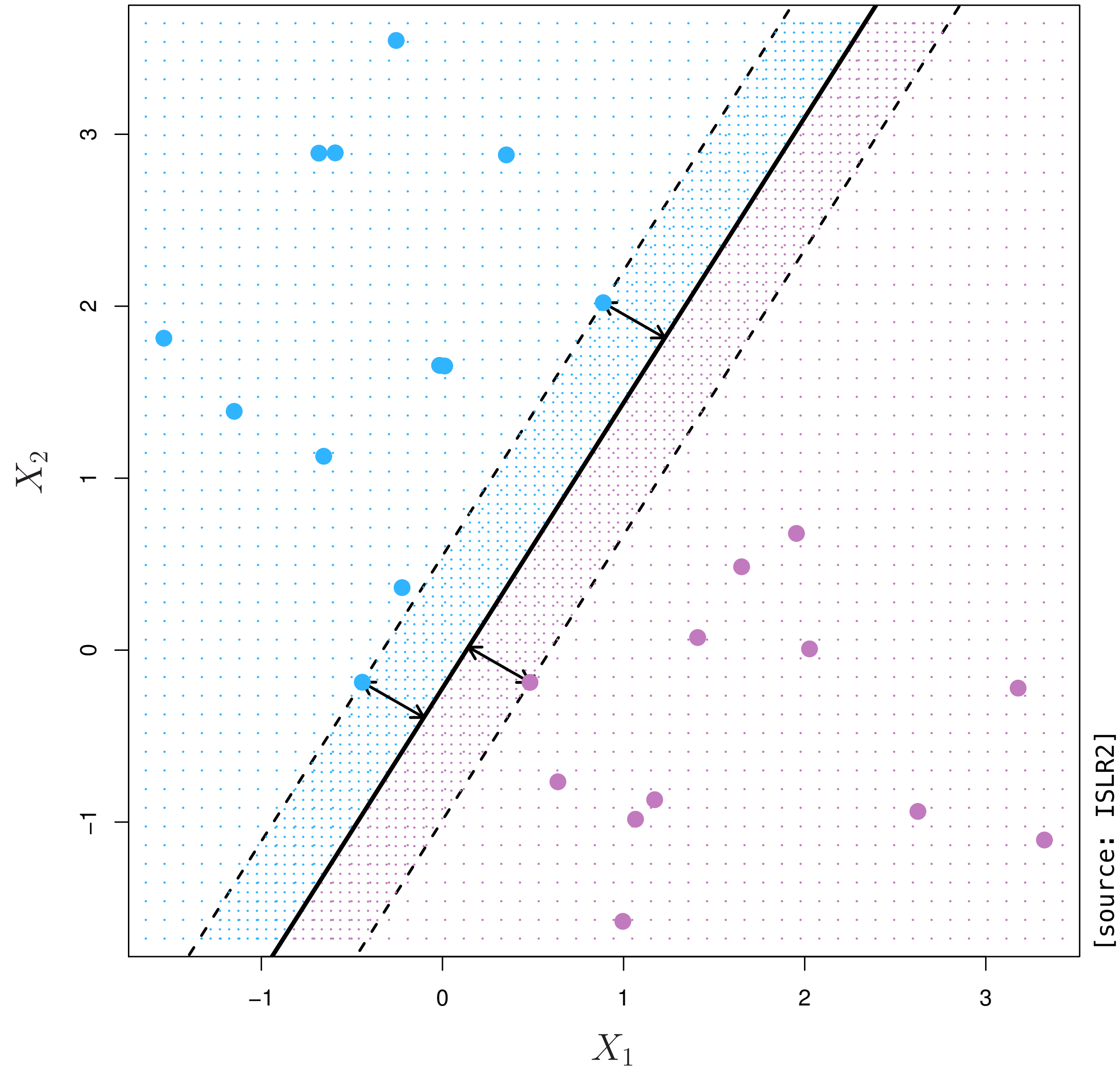


# Hyperplanes Divide Spaces in Half



if a separating hyperplane exists, there will be  $\infty$  many of them  
how do we choose just one?

# Maximal Margin Classifier



choose the one that's furthest from the training examples

[source: ISLR2]