



LINEAR CLASSIFIERS IN PYTHON

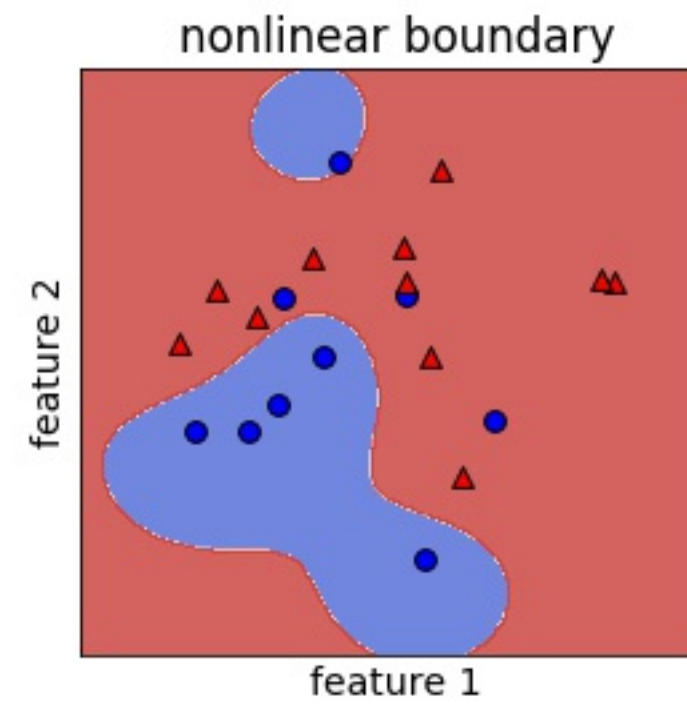
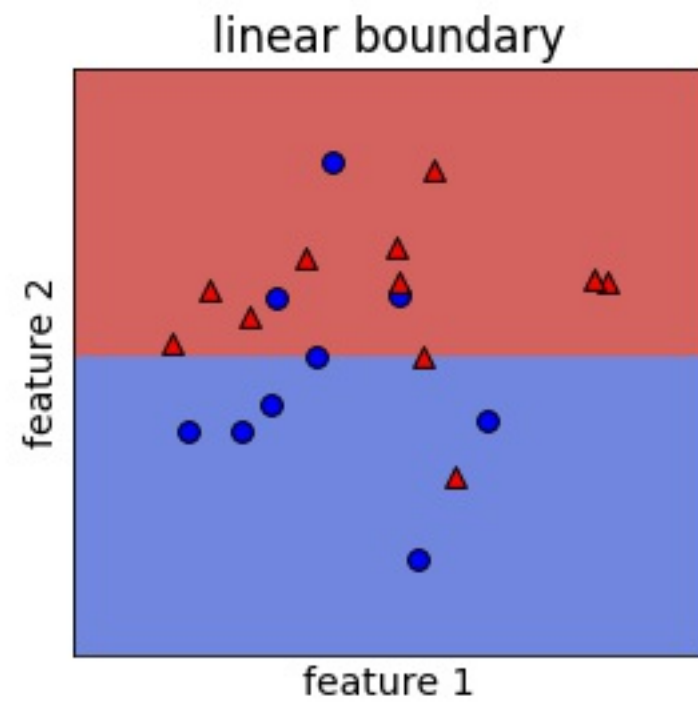
# Linear decision boundaries

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# Linear decision boundaries





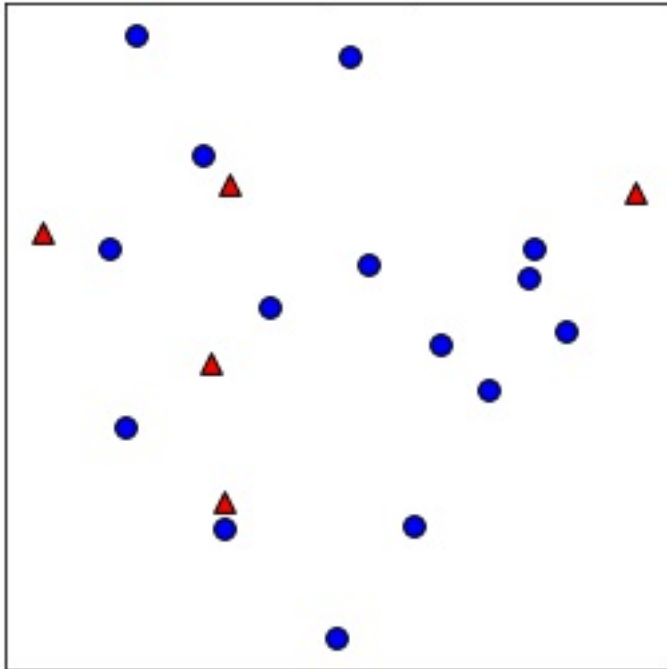
# Definitions

## Vocabulary:

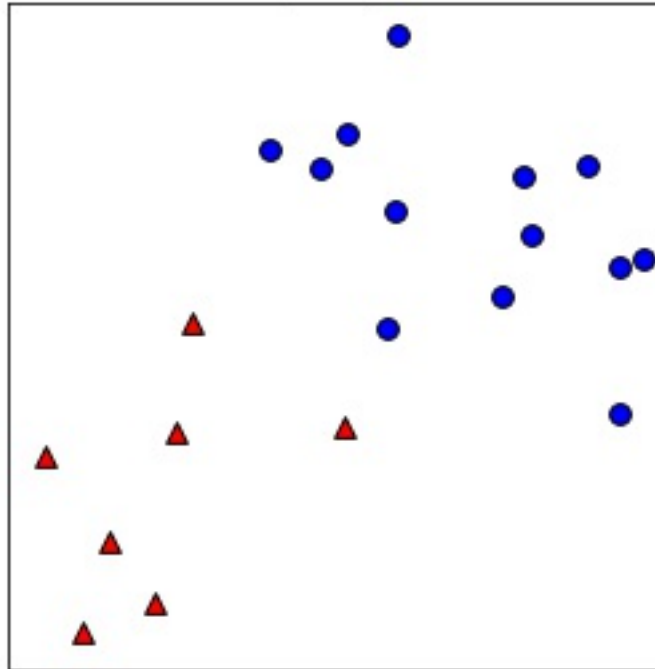
- **classification**: learning to predict categories
- **decision boundary**: the surface separating different predicted classes
- **linear classifier**: a classifier that learns linear decision boundaries
  - e.g., logistic regression, linear SVM
- **linearly separable**: a data set can be perfectly explained by a linear classifier

# Linearly separable data

not linearly separable



linearly separable





## LINEAR CLASSIFIERS IN PYTHON

**Let's  
practice!**