Deciding when to use a restrictive or flexible approach

Last sentence: which can lead to complicated estimates of *f* that it is difficult to understand how any individual predictor is associated with the response.

Next Slide:

First sentence: because the relationship between each predictor and the response is now modeled using a curve.

Supervised Vs Unsupervised learning:

First sentence: because each observation of the predictor is an associated response to the measurement .

Next Slide:

Third Sentence: However, since linear regression requires the measurement of y, we should not use linear regression to do unsupervised learning because there is no response variable y to predict in unsupervised learning

Next Slide:

(If the information about each customer’s spending patterns were available, then a supervised analysis would be possible)

Regression Vs Classification Problem

Methods that are available for both quantitative and qualitative response are K-nearest neighbors and boosting. (This methods will introduce later in the book)

While problems with qualitative response are often referred as classification problems. Not all regression use quantitative response, example: logistic regression uses qualitative responses.