

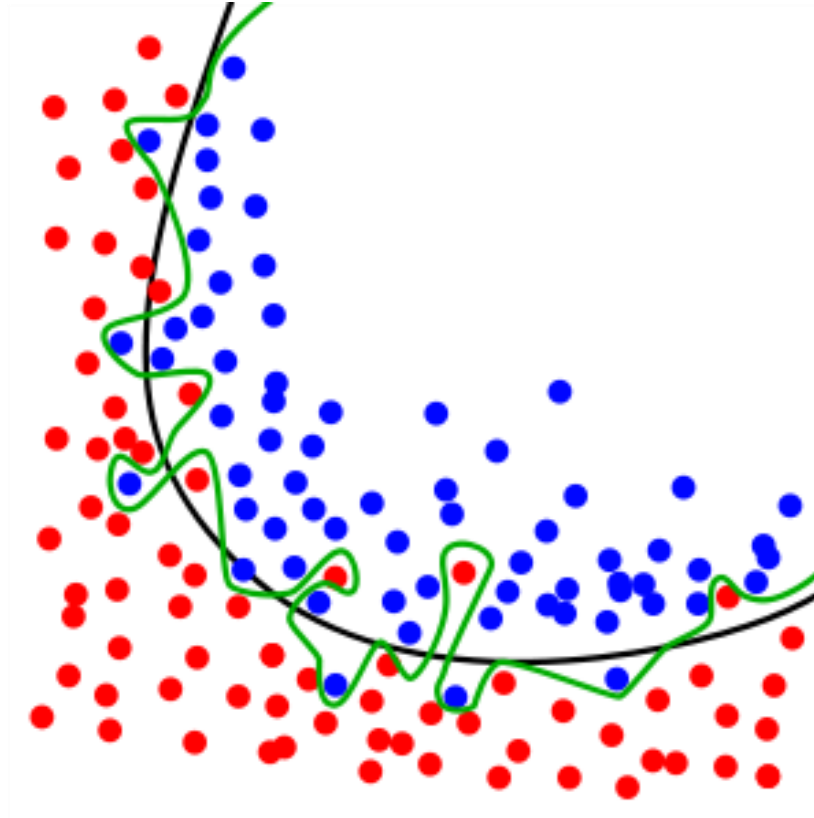
디지털미디어랩 머신러닝 여름캠프 4주차

(3) Overfitting, Cross Validation

목차

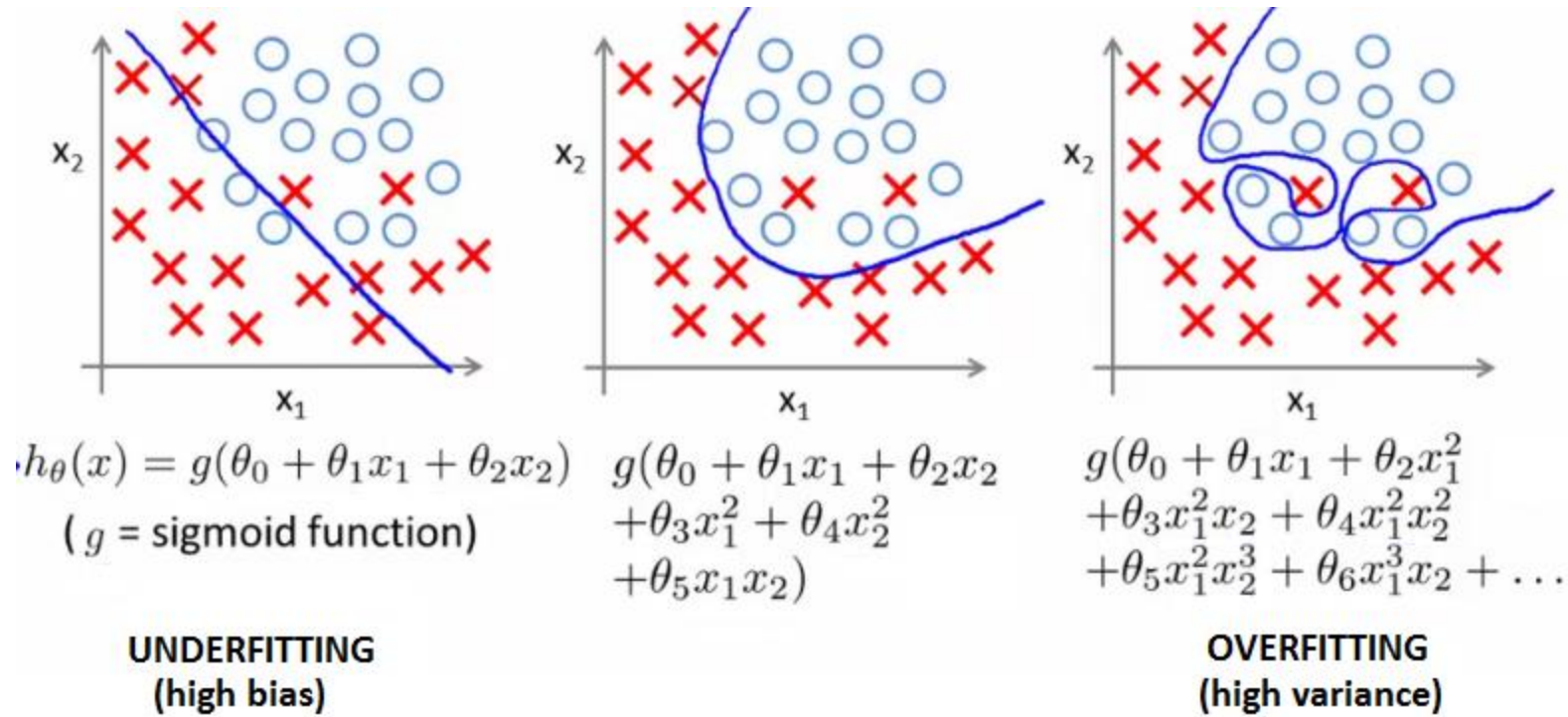
- Overfitting (과적합)
- Cross Validation (교차검증)

Overfitting



- 모델이 training data에 지나치게 학습된 것.
- 실제 데이터가 들어왔을 때 정확도가 낮아 질 수 있다.

Overfitting



Overfitting을 위한 해결책

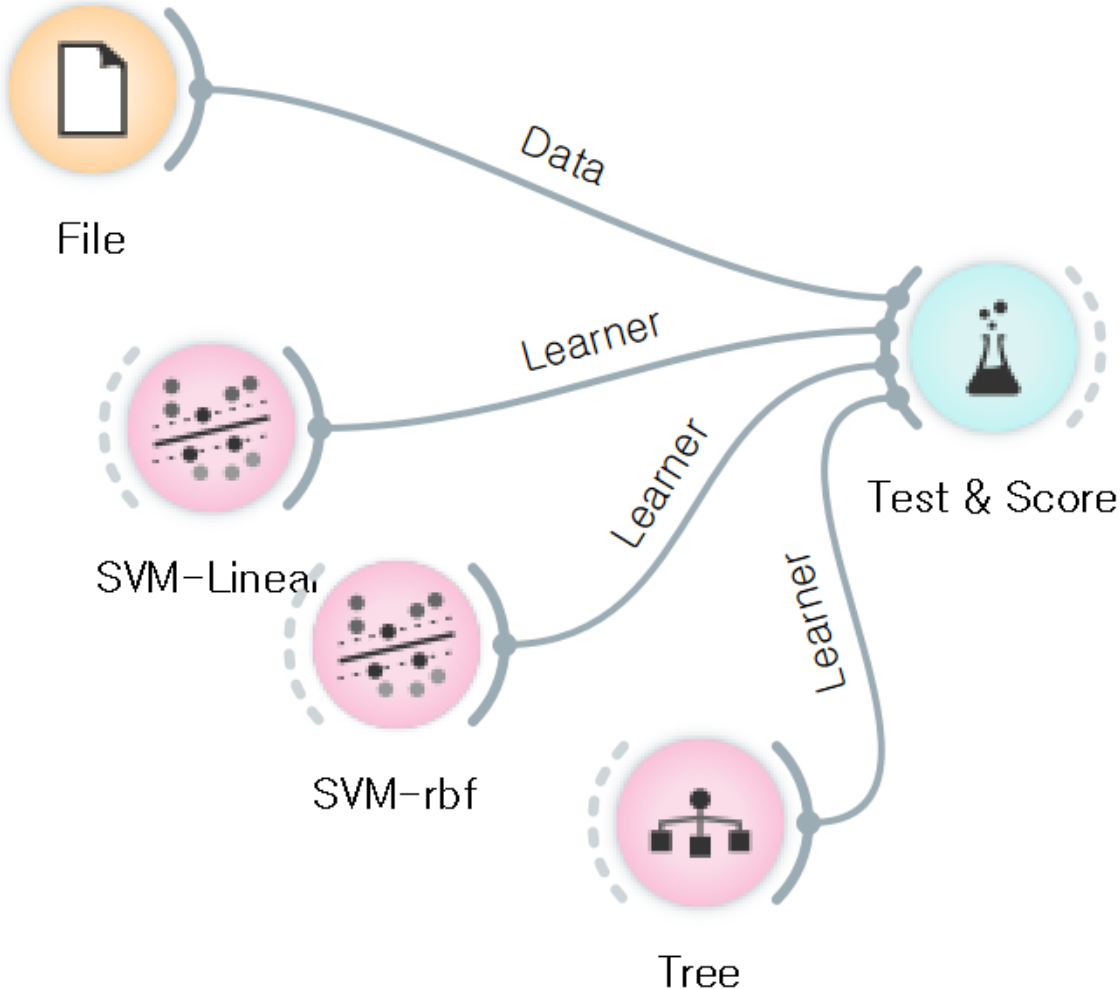
- 더 많은 데이터 학습
- Feature 수를 줄인다.
- Regularization (전체적으로 Weight의 크기를 줄인다.)
- 교차 검증(Cross Validation) 으로 평가

Cross Validation

K-fold Cross Validation

	Fold 1	Fold 2	Fold 3	Fold 4	Fold 5
Iteration 1	Train	Train	Train	Train	Test
Iteration 2	Train	Train	Train	Test	Train
Iteration 3	Train	Train	Test	Train	Train
Iteration 4	Train	Test	Train	Train	Train
Iteration 5	Test	Train	Train	Train	Train

Cross Validation



참고 자료

lec 07-1: 학습 rate, Overfitting, 그리고 일반화 (Regularization)

https://www.youtube.com/watch?v=1jPjVoDV_uo&feature=youtu.be

Wikipedia – Overfitting

<https://en.wikipedia.org/wiki/Overfitting>