# <오전>

## 머신러닝 5단계 프로세스에 대한 설명

### 머신러닝의 유형

정답 데이터 유무에 따라 지도학습과 비지도학습으로 구분

- 지도학습 : 명시적인 정답 데이터를 가지고 규칙을 찾음

• 정답 데이터를 포함한 전체 데이터를 머신러닝 알고리즘에 적용

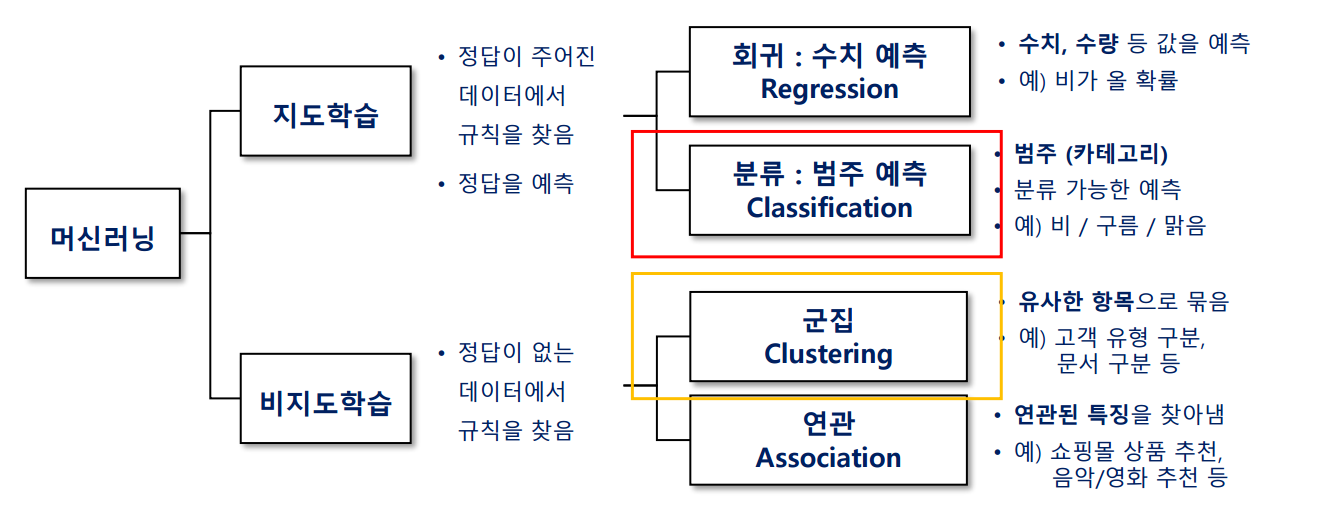
- 비지도학습 : 정답 데이터 없이 규칙을 찾음

• 정답 데이터 없음

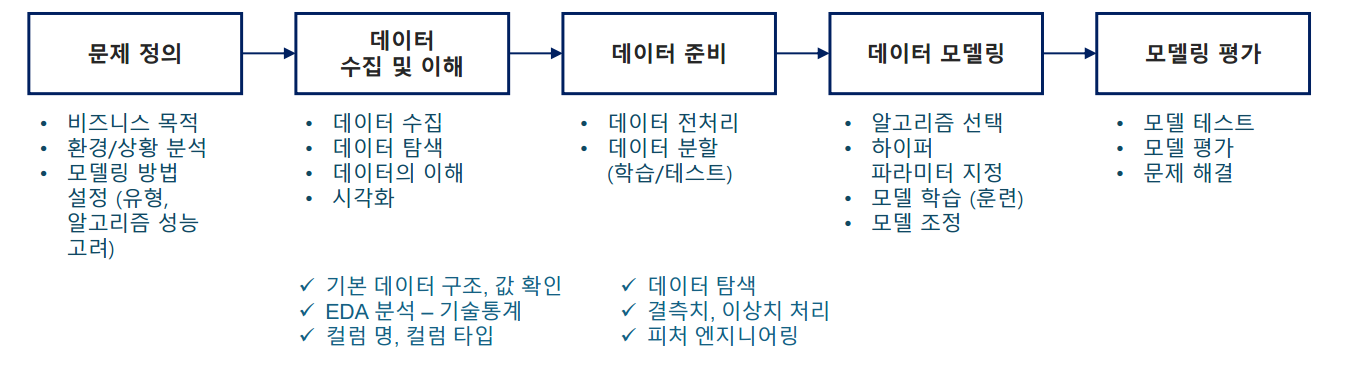
• 학습을 통해 규칙을 찾아냄

• 서로 비슷한 데이터를 그룹화

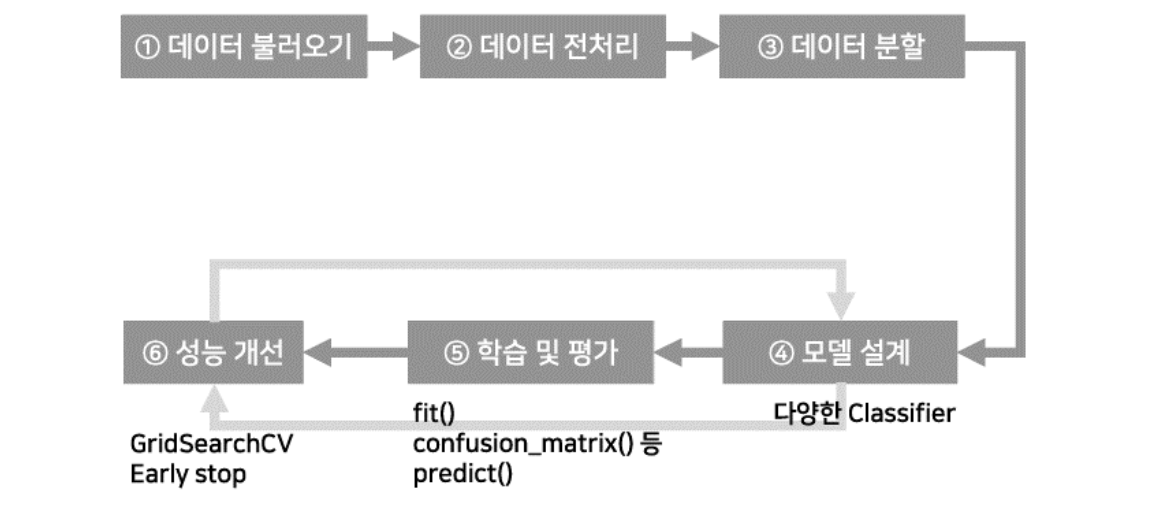
지도학습은 수치 등의 값을 예측하는 회귀, 예/아니오 등의 범주를 예측하는 분류로 나눠지며 비지도학습은 유사한 항목을 그룹화한 군집 등이 있음



### 머신러닝 5단계 프로세스



### 머신러닝 모델링 6단계



## 분류 알고리즘

**KNN (K-Nearest Neighbor)**

1) 가장 가까운 데이터(이웃)을 기준으로 새로운 데이터의 클래스를 분류

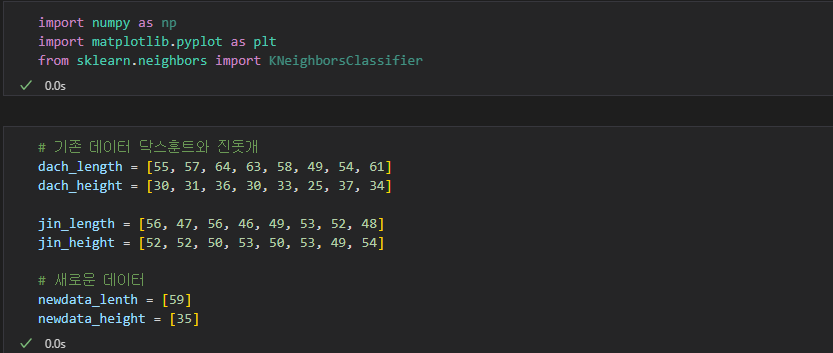
2) 지도학습 알고리즘

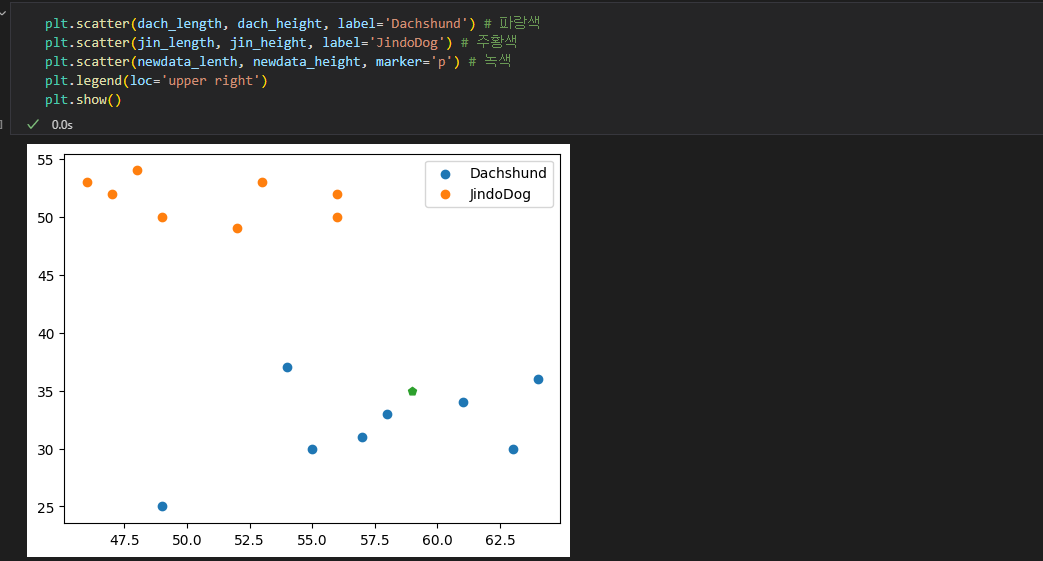
3) 다수가 속한 클래스로 분류

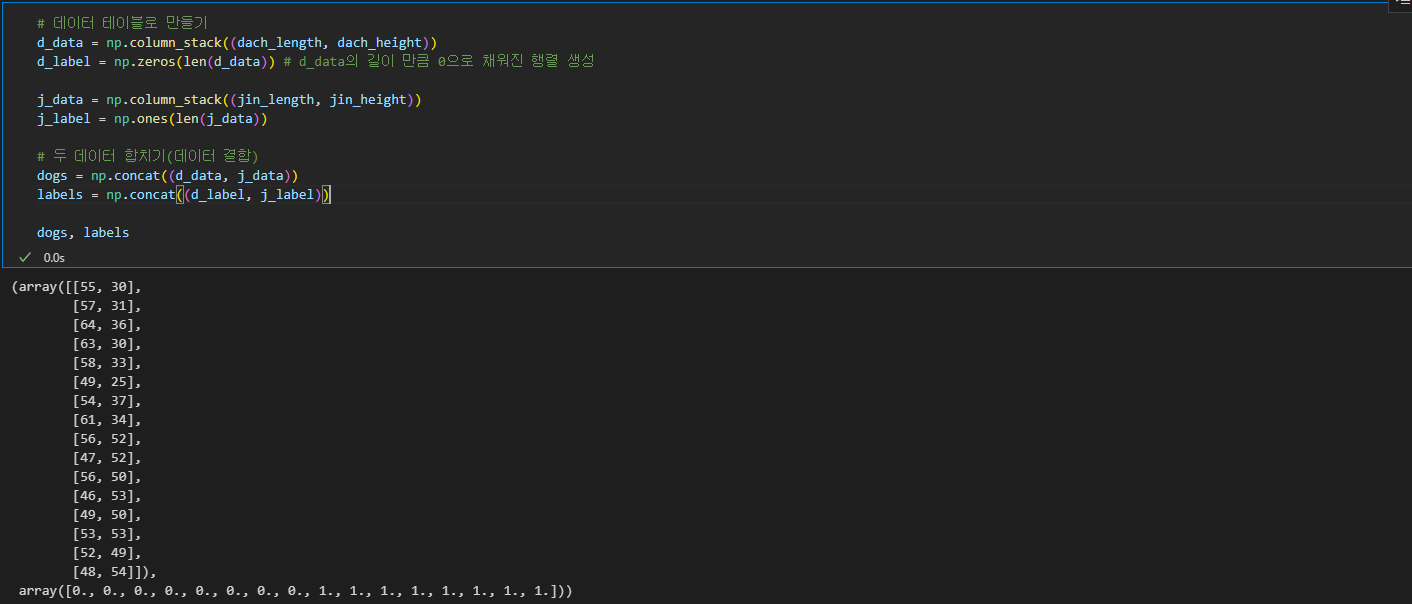
4) 회귀일때는 유사한 레코드들의 평균을 예측값으로 사용

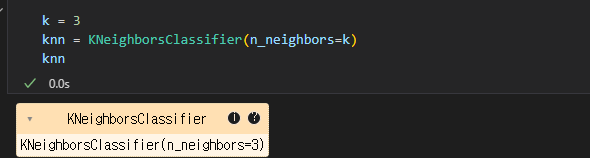
**로지스틱 회귀**결과값을 예측하는 회귀식에 로짓(logit, 로그함수)을 이용하여 결과값을 0~1사이의 범위로 출력하여 분류하는 머신러닝 모델 → 반응변수가 범주형인 경우에 적용되는 회귀분석모형

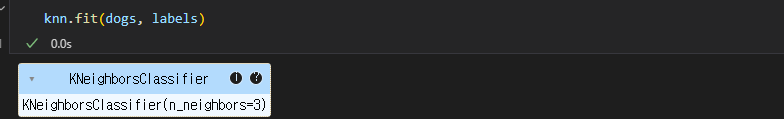
### KNN 사용 분류 알고리즘 실습

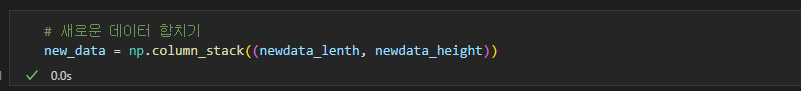


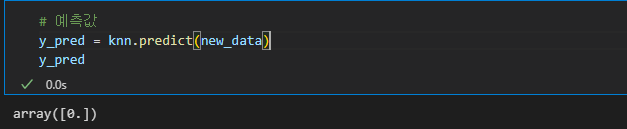


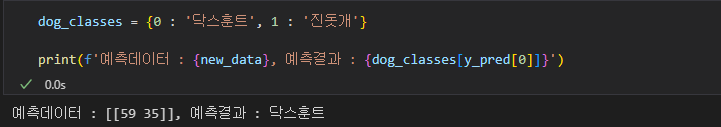






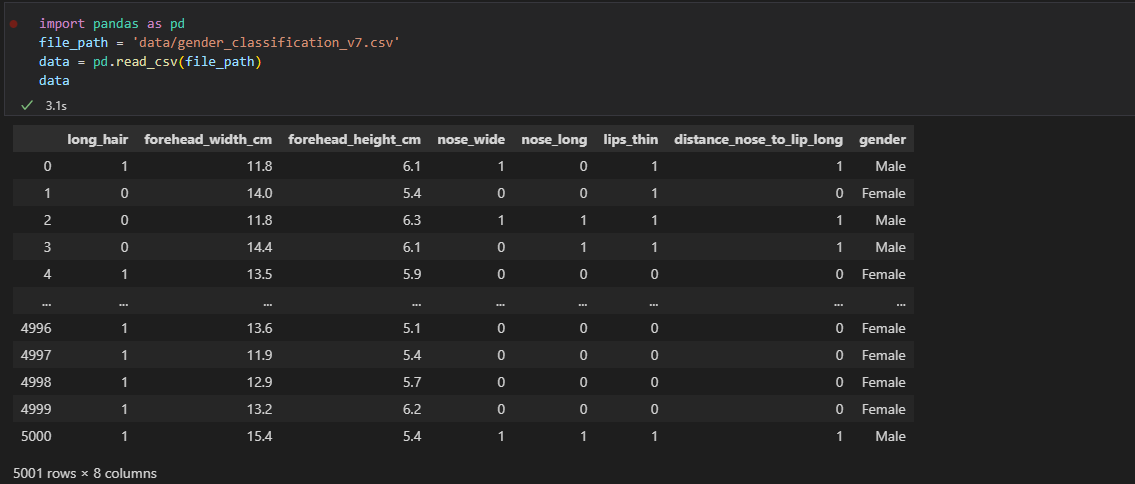


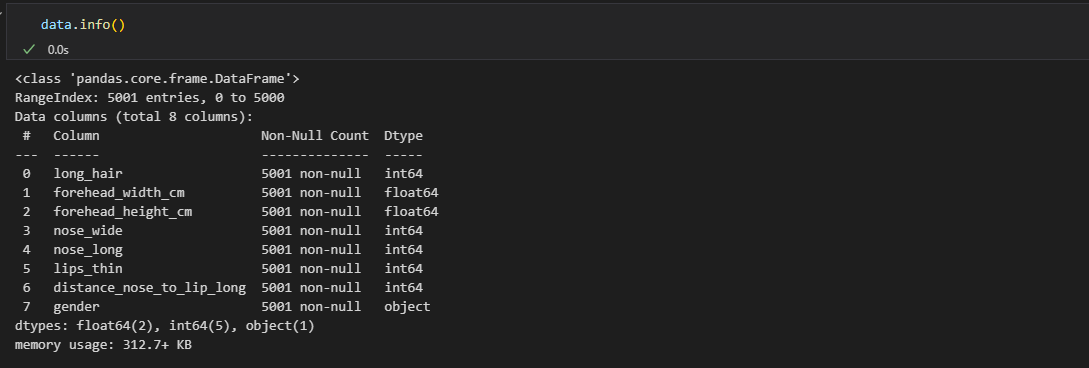


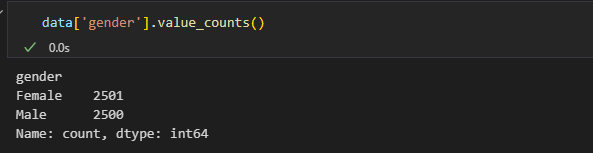




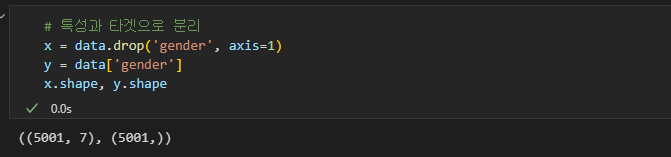
### 성별 데이터를 이용한 로지스틱회귀 모형 실습

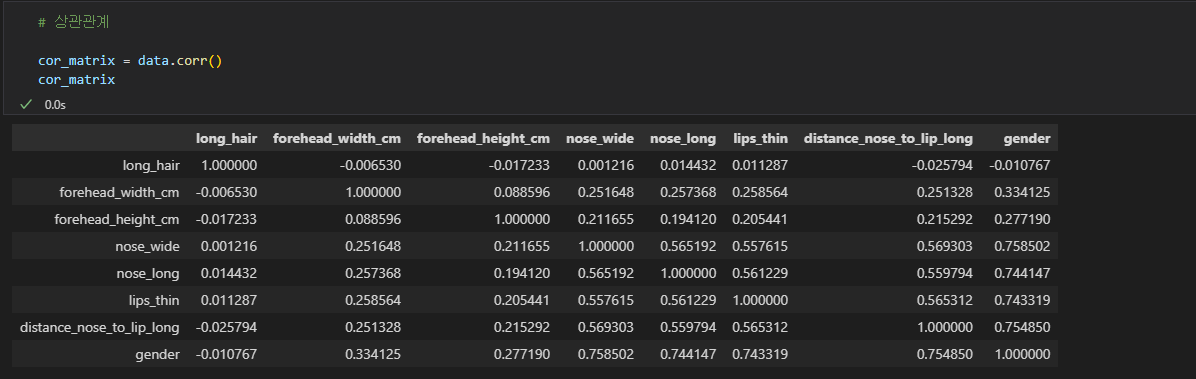


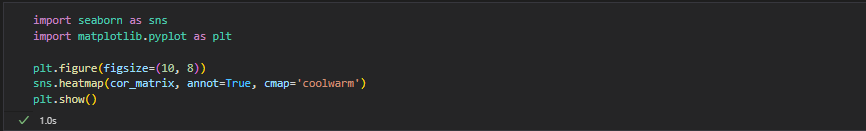


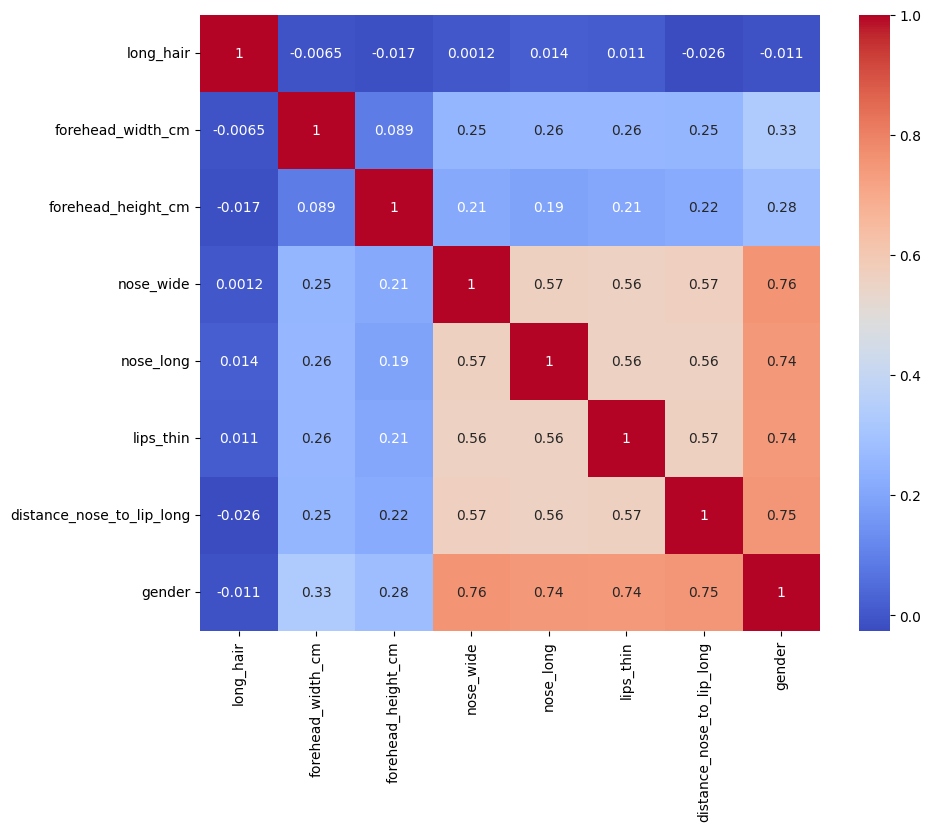


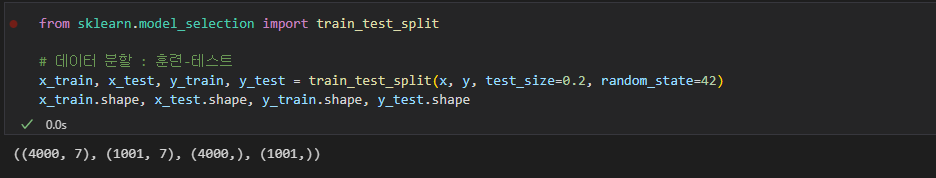


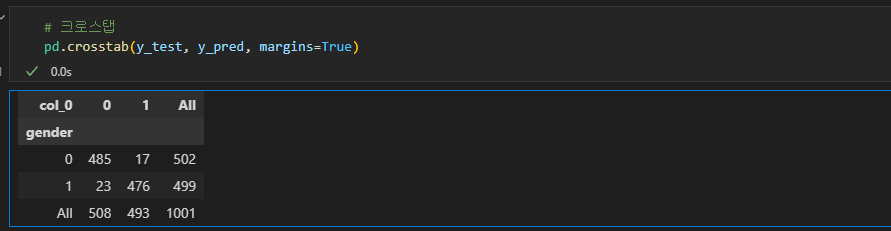


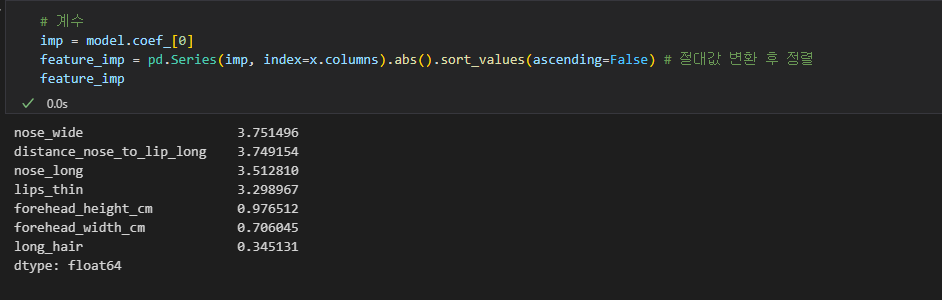




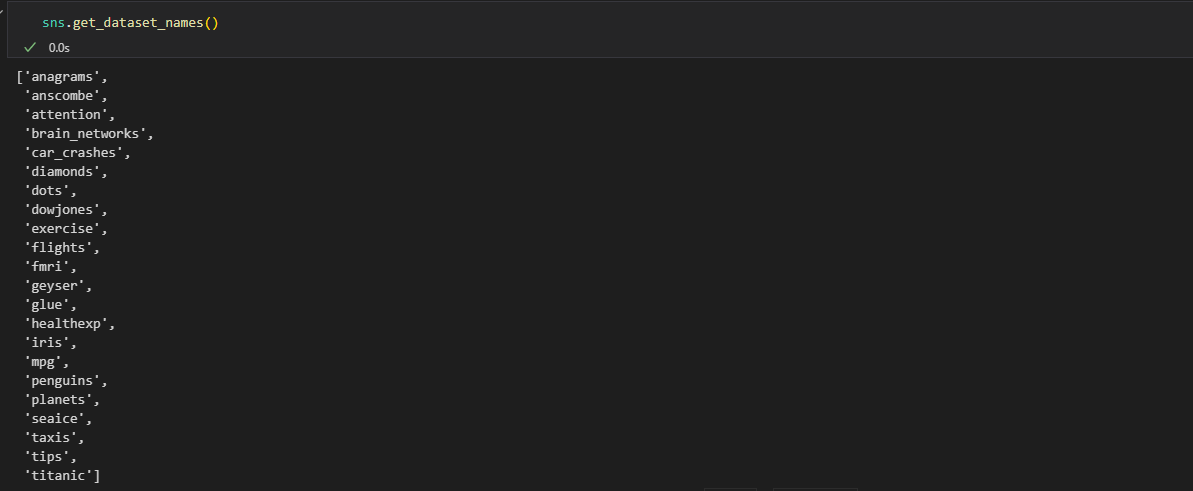


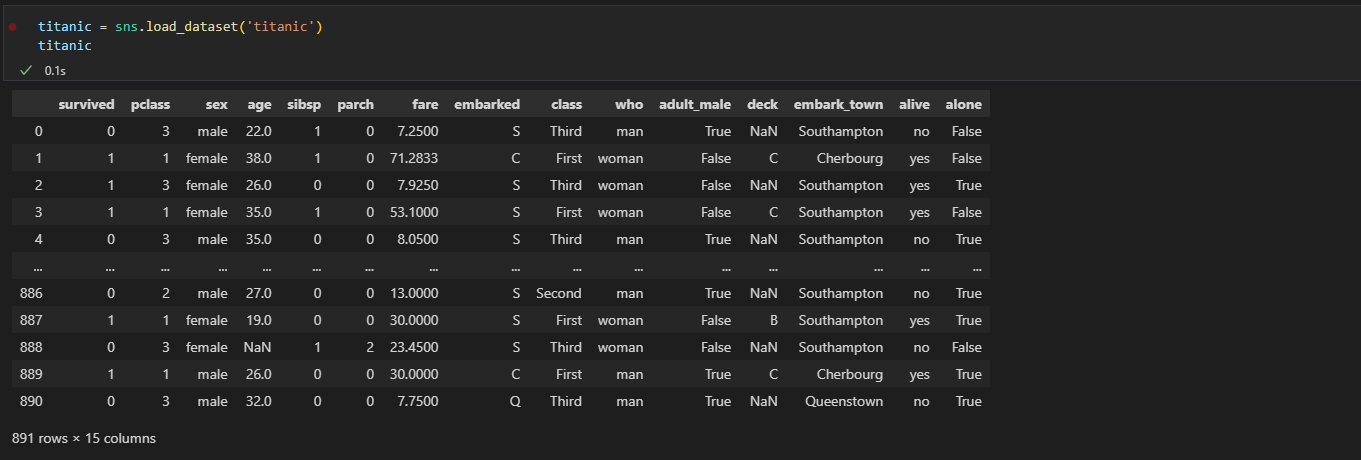


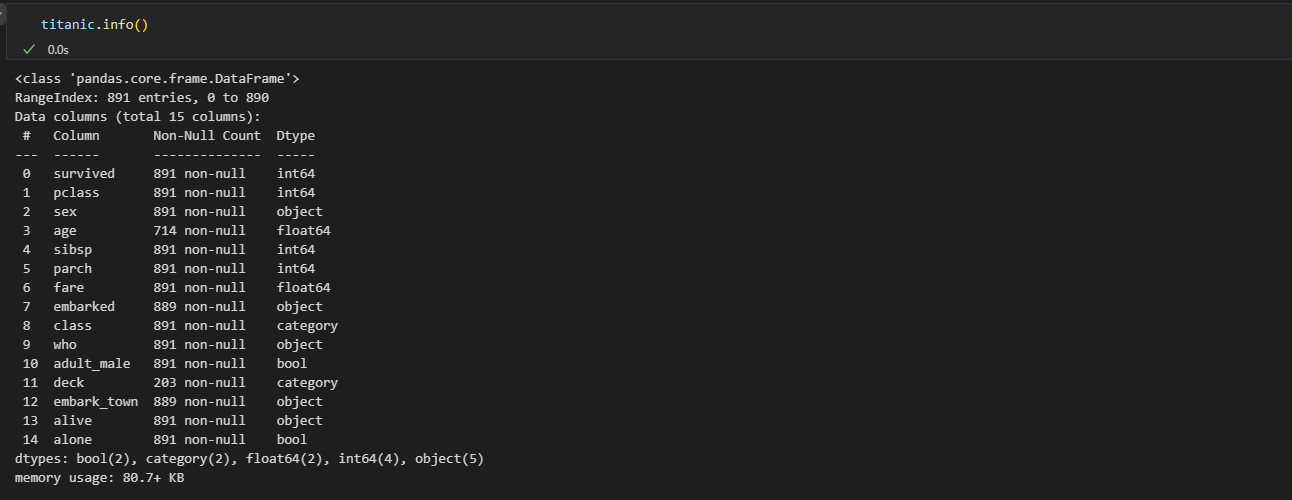


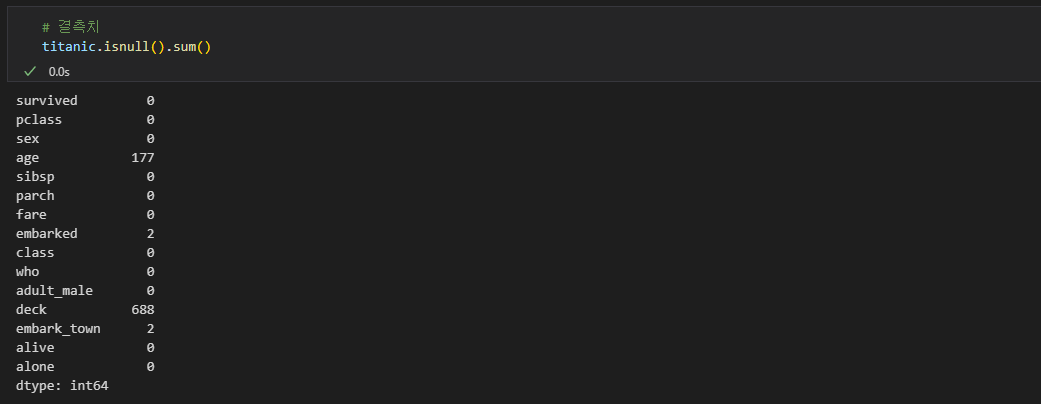


### Seaborn

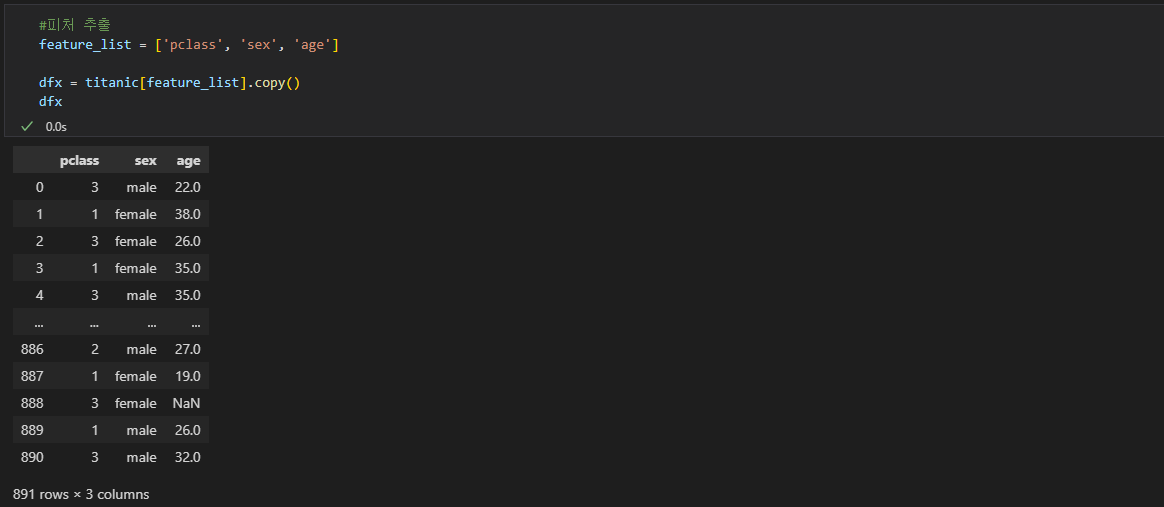


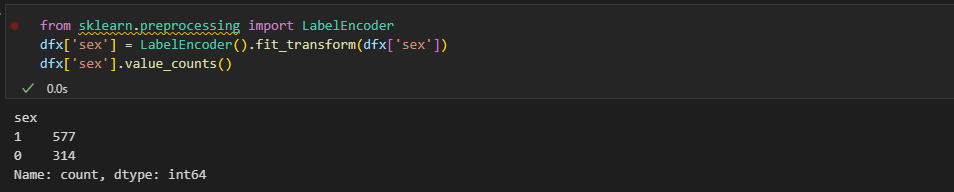


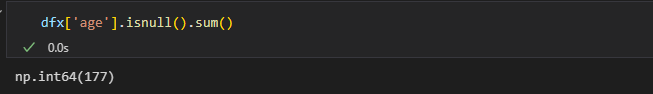


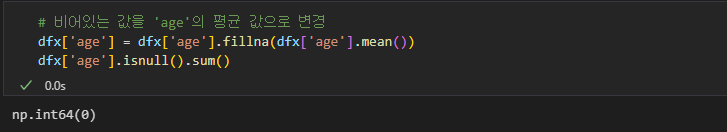


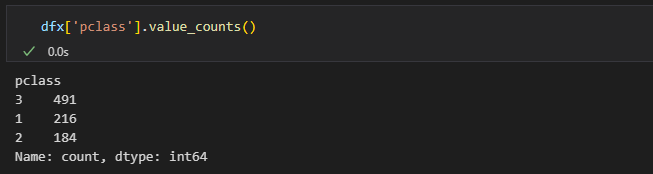


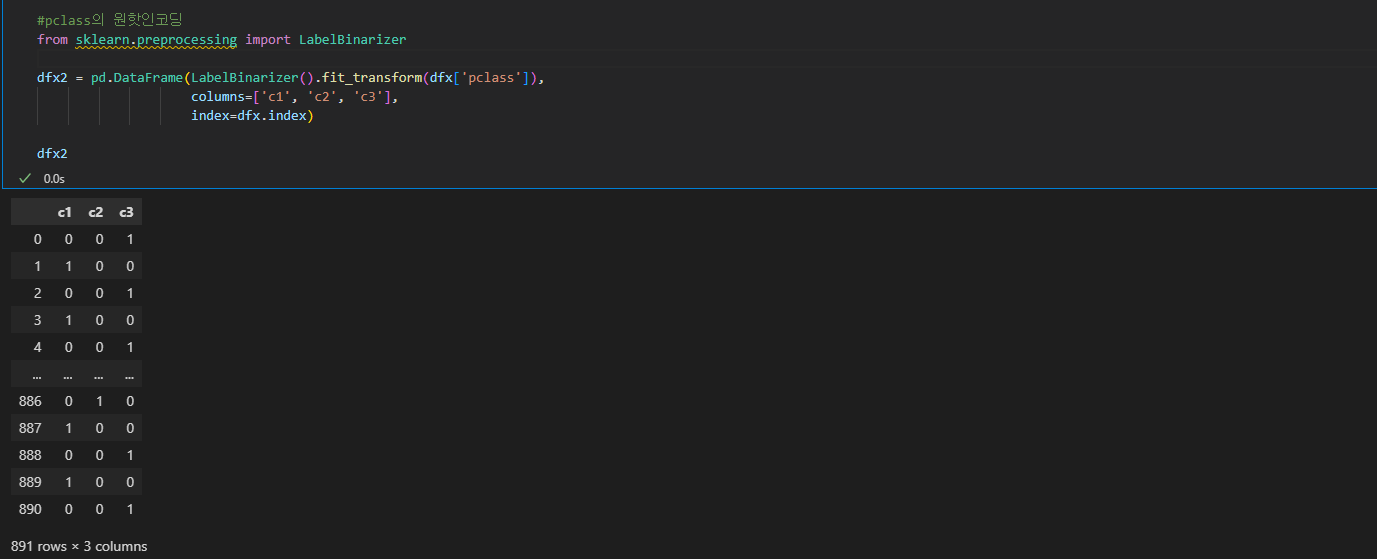


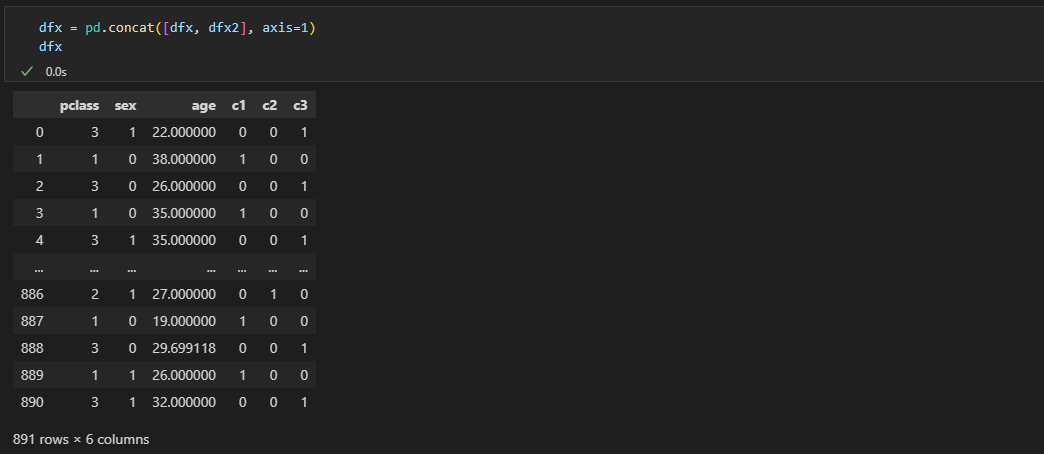


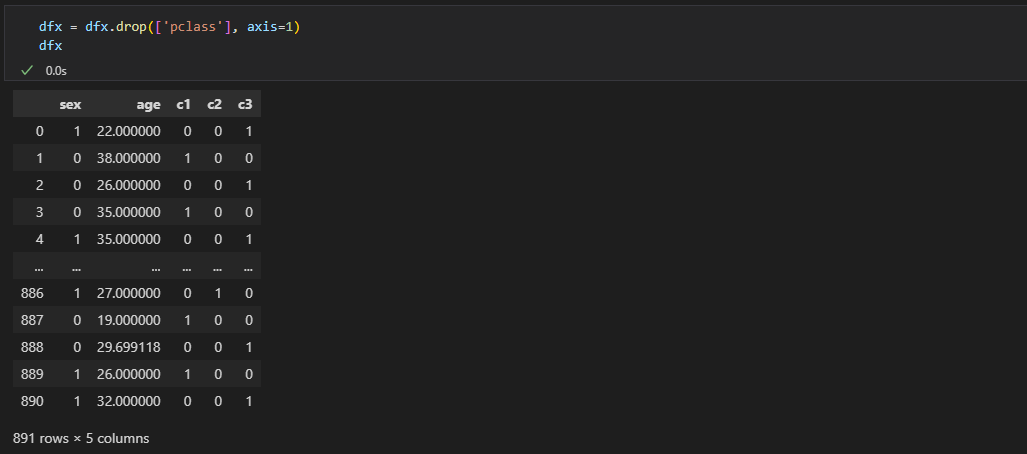


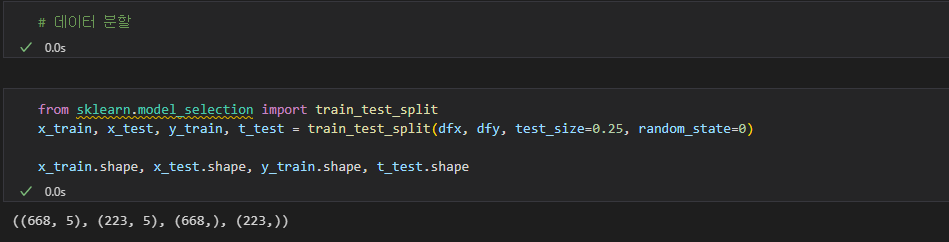


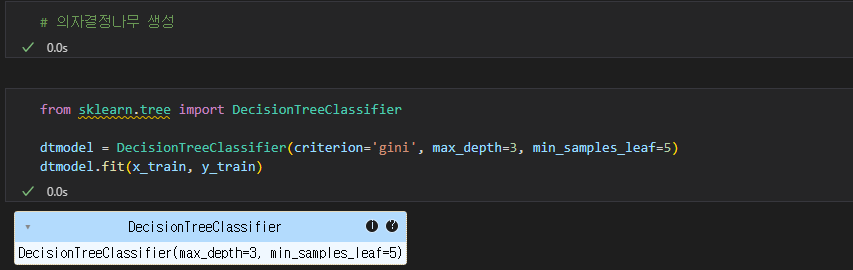


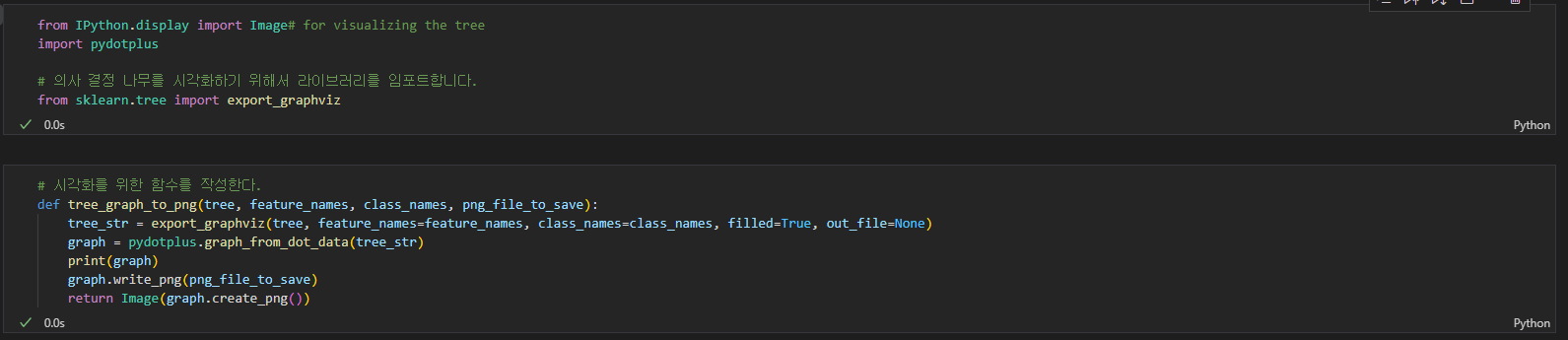
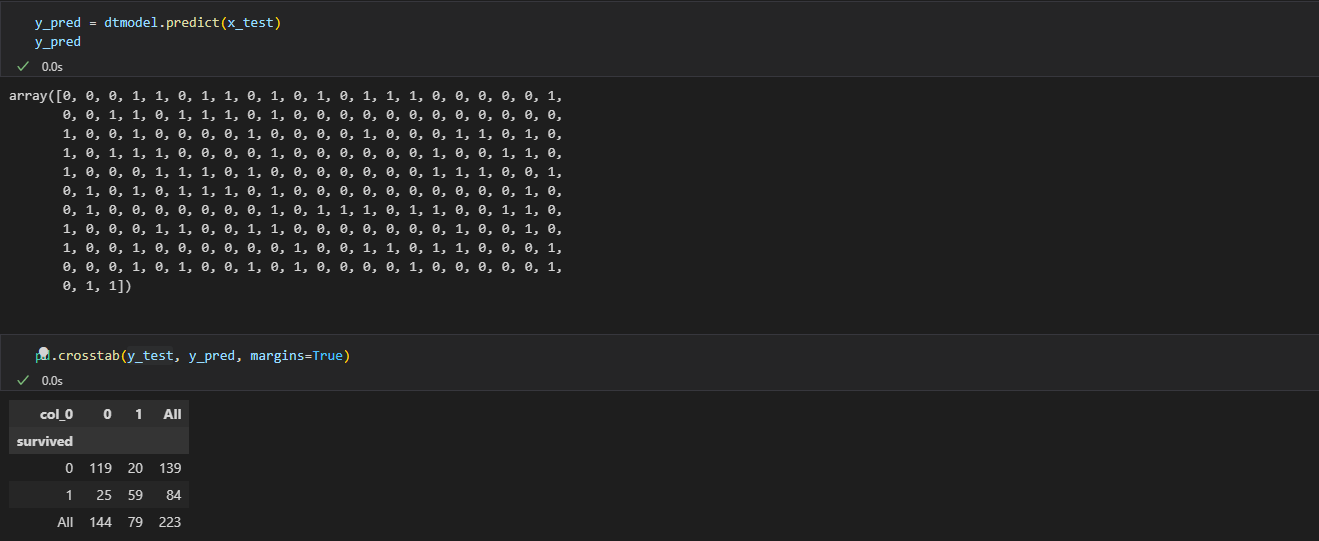


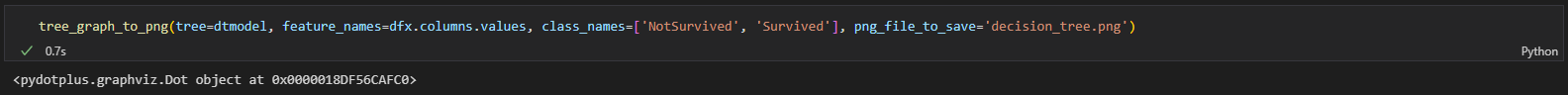


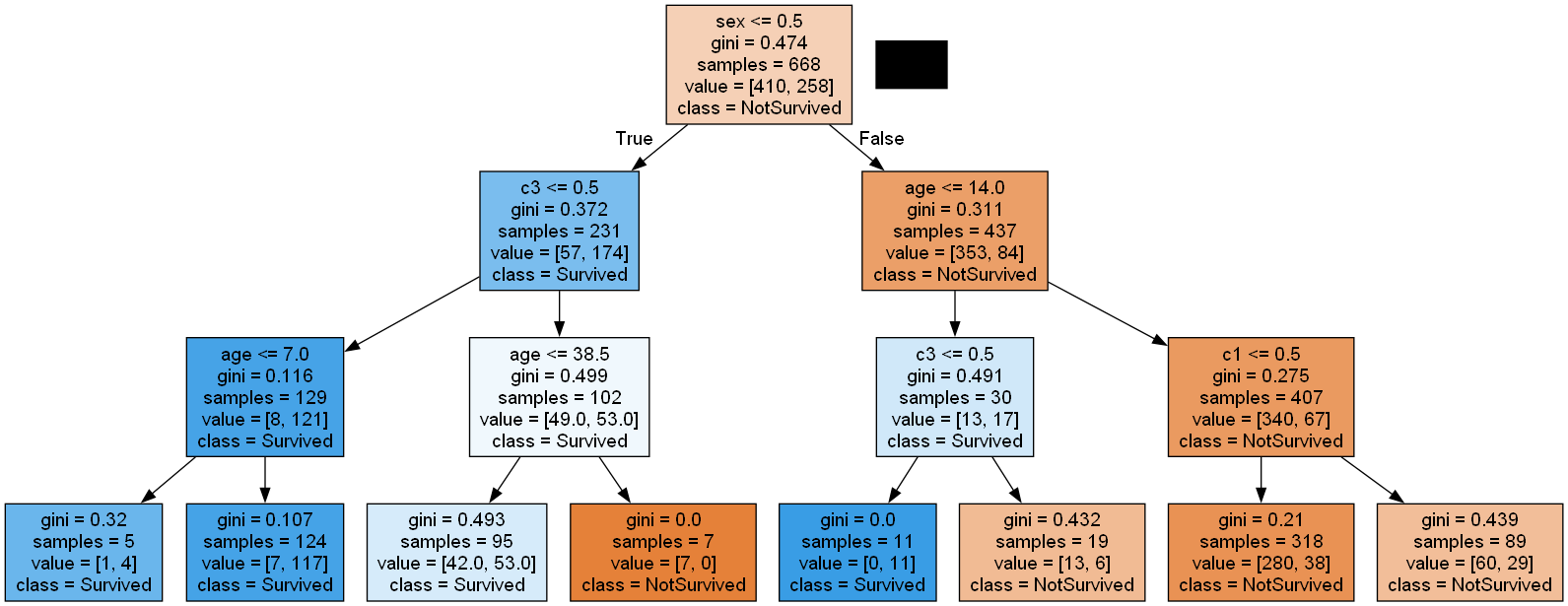




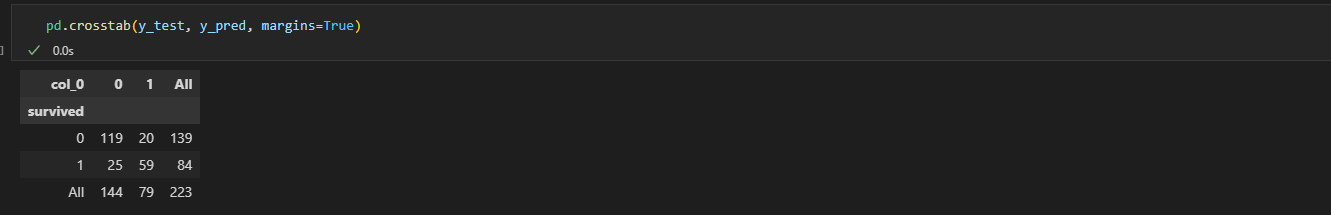


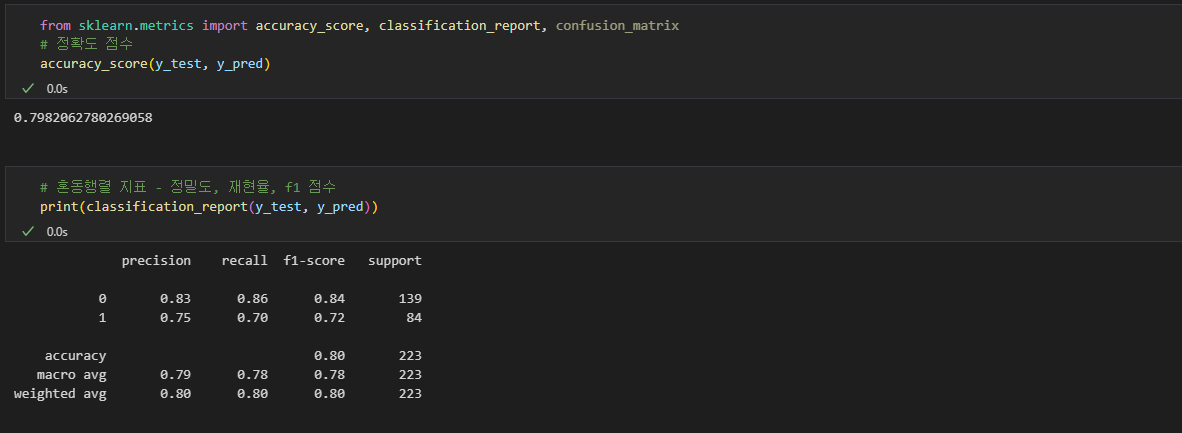


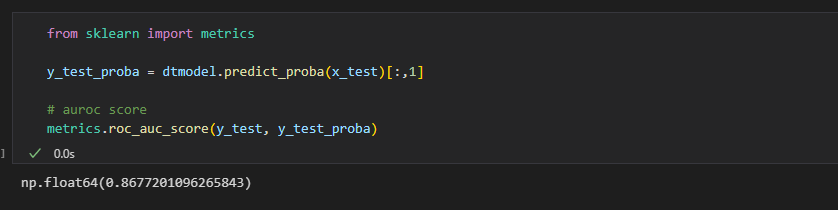


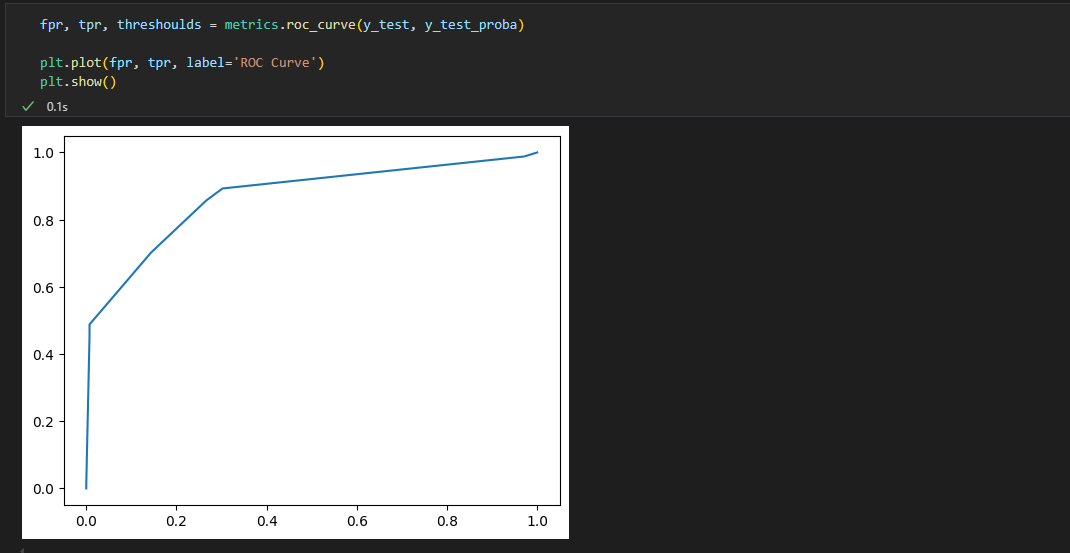


# <오후>

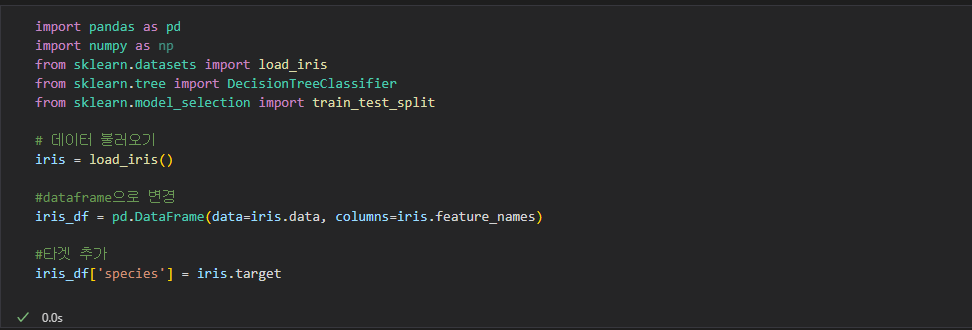


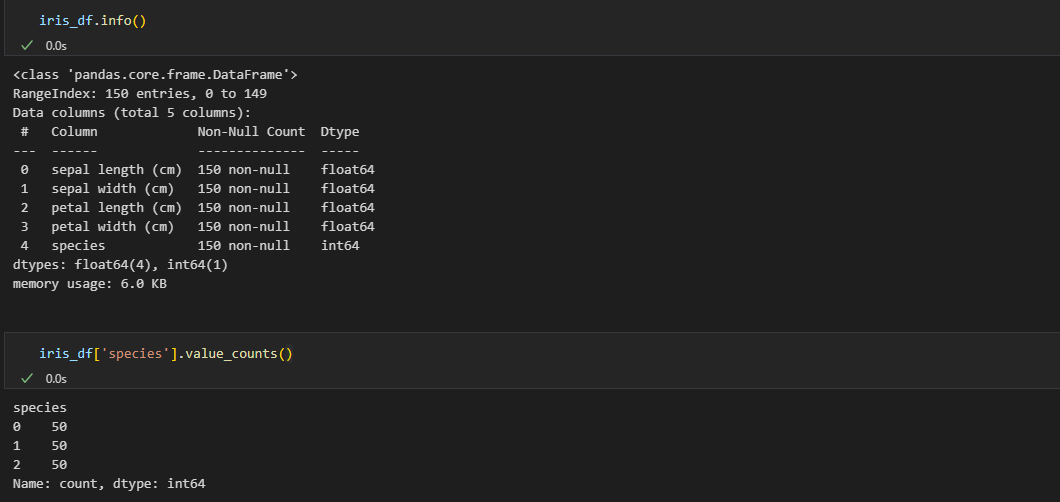


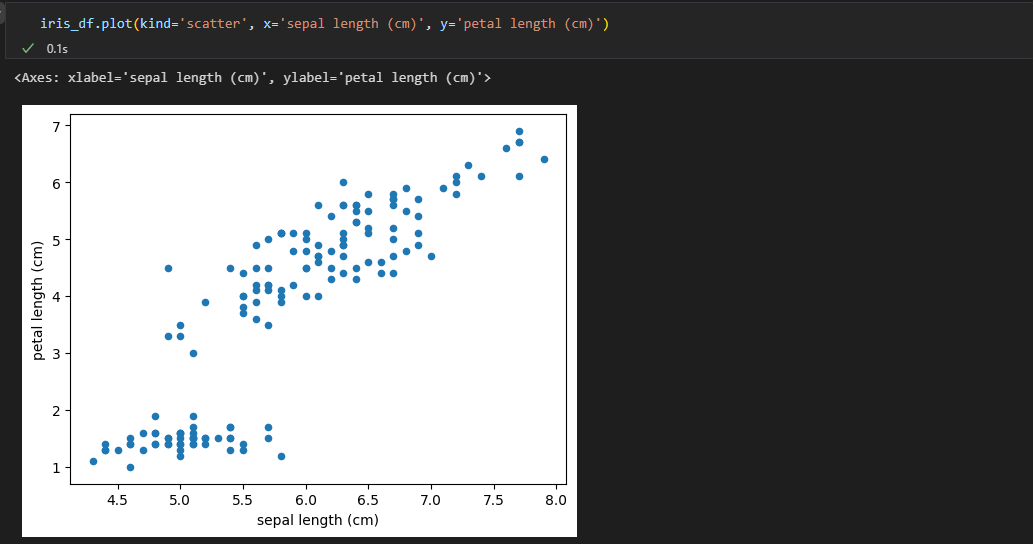


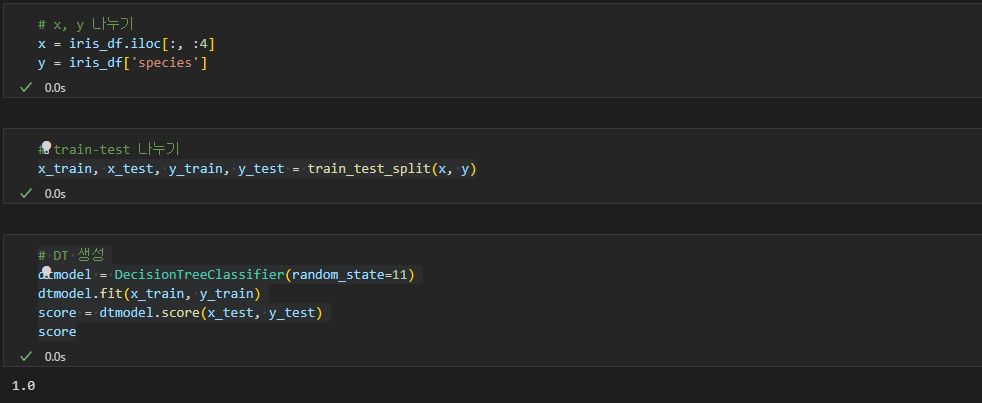


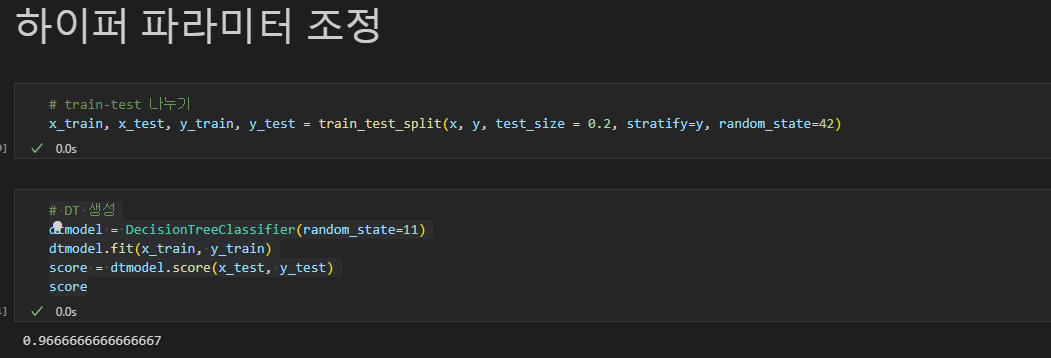
## GridSearchCV 실습

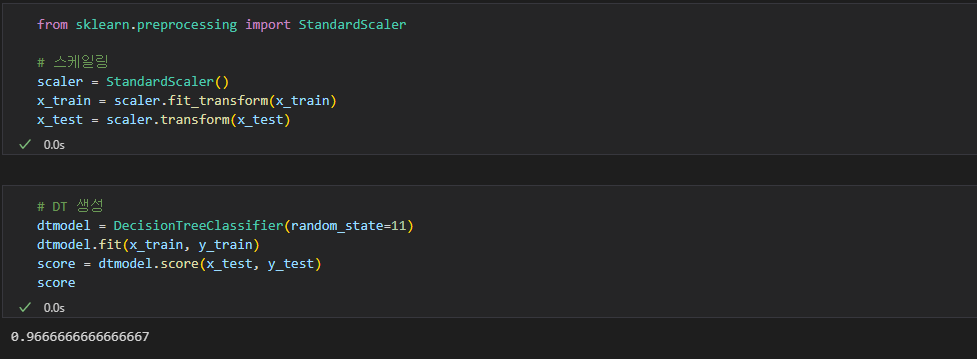


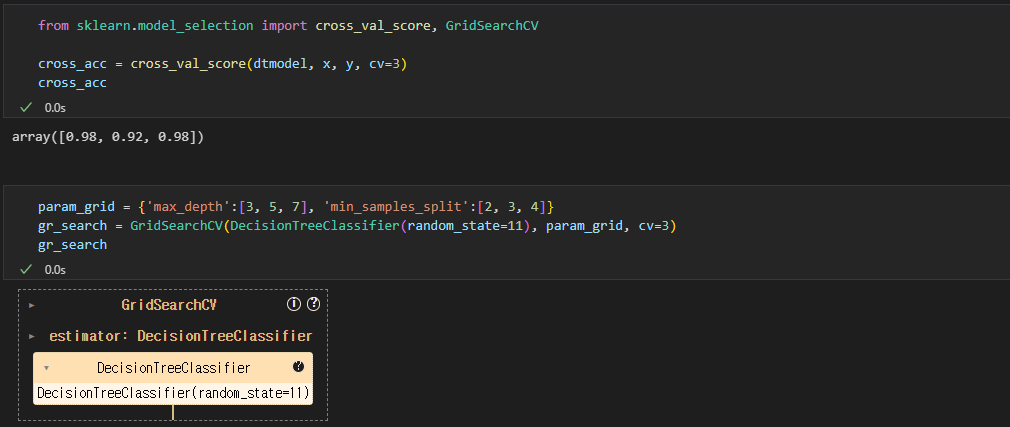


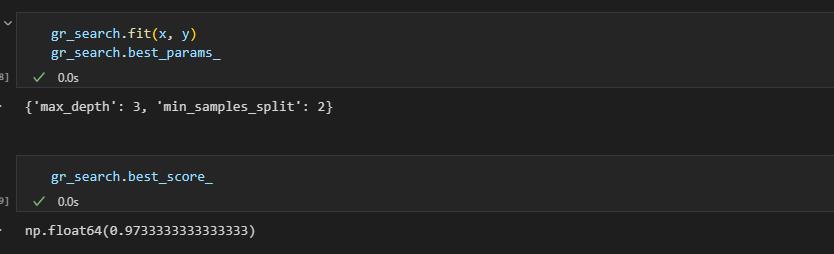


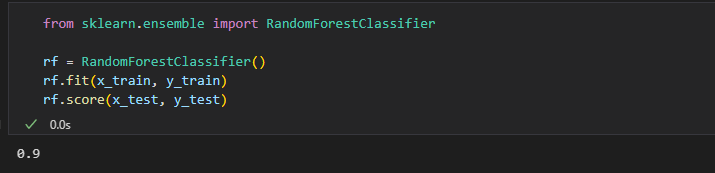












## 로켓발사 모델 구축 미션

## 신용카드 위조 감지 실습