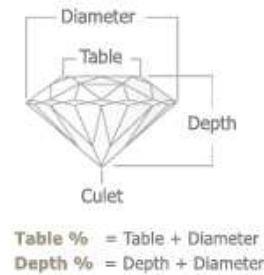
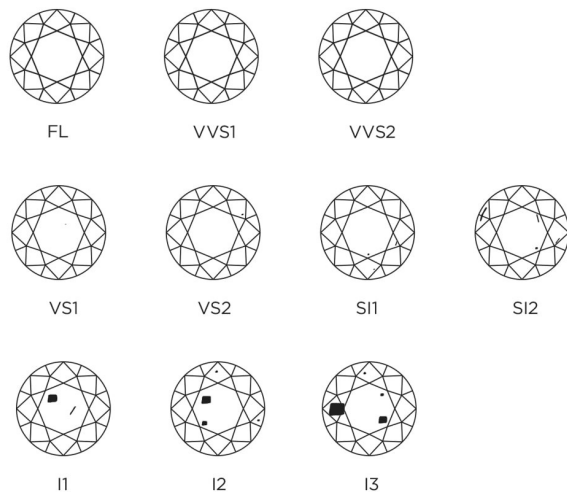


# Diamond 가격 예측

AI\_14\_송일수

# Diamond의 다양한 특성으로 가격 예측



	Depth %	Table %
<b>Excellent</b>	59.0% - 61.0%	53% - 60%
<b>Very Good</b>	58.0% - 62.0%	61% - 62%
<b>Good</b>	56% - 64%	62% - 64%
<b>Fair</b>	64% - 70%	64% - 66%
<b>Poor</b>	over 70%	over 66% or under 53%



# TASK FLOW

데이터 다운로드 from Kaggle

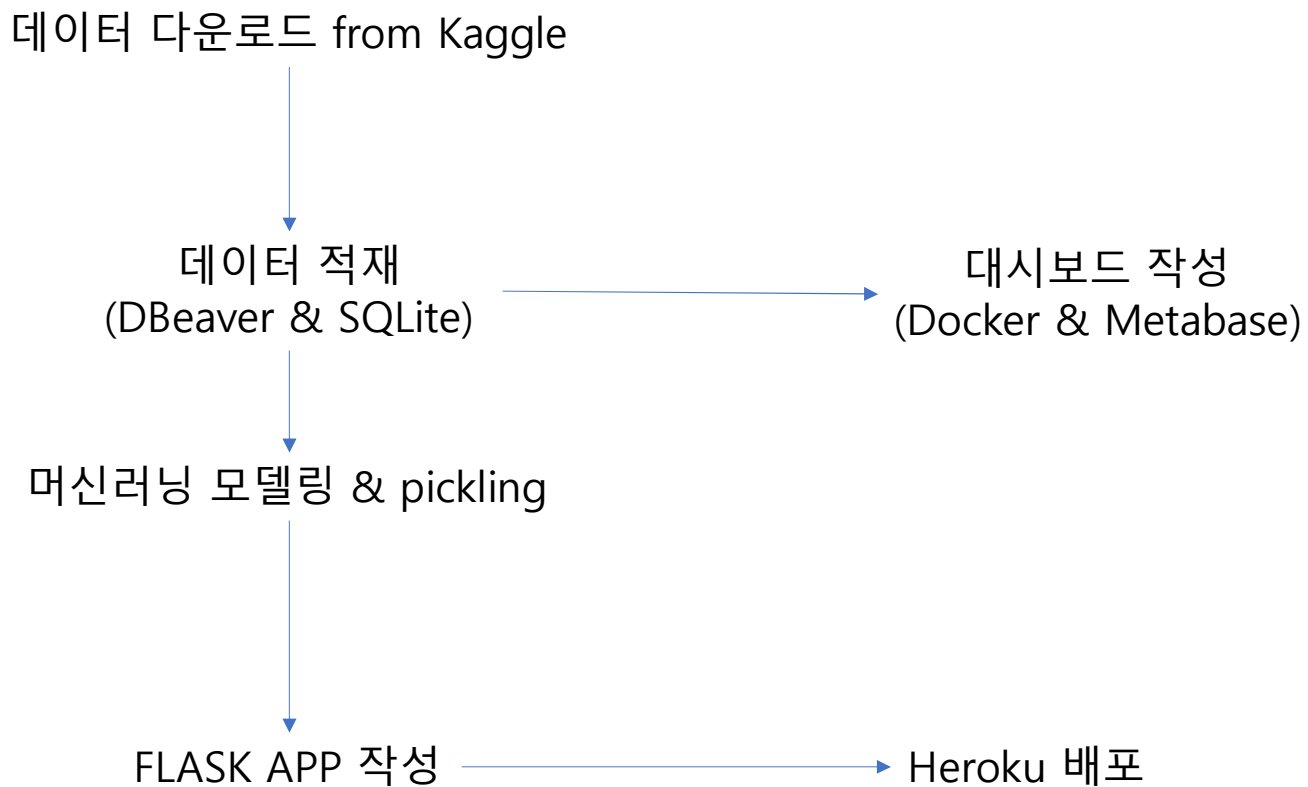
↓  
데이터 적재  
(DBeaver & SQLite)

→ 대시보드 작성  
(Docker & Metabase)


↓  
머신러닝 모델링 & pickling

↓  
FLASK APP 작성

→ Heroku 배포



# 데이터 수집

kaggle

+

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## Diamonds

Analyze diamonds by their cut, color, clarity, price, and other attributes



Data

Code (334)

Discussion (6)

Metadata

## About Dataset

### Context

This classic dataset contains the prices and other attributes of almost 54,000 diamonds. It's a great dataset for beginners learning to work with data analysis and visualization.

### Content

price price in US dollars (1\$326--1\$18,823)  
carat carat weight of the diamond (0.2--5.01)

Usability ⓘ  
7.65

License  
Unknown

Expected update frequency

	A	B	C	D	E	F	G	H	I	J	K
1		carat	cut	color	clarity	depth	table	price	x	y	z
2	1	0.23	Ideal	E	SI2	61.5	55	326	3.95	3.98	2.43
3	2	0.21	Premium	E	SI1	59.8	61	326	3.89	3.84	2.31
4	3	0.23	Good	E	VS1	56.9	65	327	4.05	4.07	2.31
5	4	0.29	Premium	I	VS2	62.4	58	334	4.2	4.23	2.63
6	5	0.31	Good	J	SI2	63.3	58	335	4.34	4.35	2.75
7	6	0.24	Very Good	J	VVS2	62.8	57	336	3.94	3.96	2.48
8	7	0.24	Very Good	I	VVS1	62.3	57	336	3.95	3.98	2.47
9	8	0.26	Very Good	H	SI1	61.9	55	337	4.07	4.11	2.53
10	9	0.22	Fair	E	VS2	65.1	61	337	3.87	3.78	2.49

# 데이터 적재



Enter a part of object name

▼ pj3.db 2

- 테이블
  - diamonds
- 뷰
- 인덱스
- 시퀀스
- 테이블 트리거
- 데이터 타입

diamonds Enter a SQL expression to filter results (use Ctrl+Space)

	123 Column1	123 carat	ABC cut	ABC color	ABC clarity	123 depth	123 table	123 price	123 x	123 y	123 z
1	1	0.23	Ideal	E	SI2	61.5	55	326	3.95	3.98	2.43
2	2	0.21	Premium	E	SI1	59.8	61	326	3.89	3.84	2.31
3	3	0.23	Good	E	VS1	56.9	65	327	4.05	4.07	2.31
4	4	0.29	Premium	I	VS2	62.4	58	334	4.2	4.23	2.63
5	5	0.31	Good	J	SI2	63.3	58	335	4.34	4.35	2.75
6	6	0.24	Very Good	J	VVS2	62.8	57	336	3.94	3.96	2.48
7	7	0.24	Very Good	I	VVS1	62.3	57	336	3.95	3.98	2.47
8	8	0.26	Very Good	H	SI1	61.9	55	337	4.07	4.11	2.53
9	9	0.22	Fair	E	VS2	65.1	61	337	3.87	3.78	2.49
10	10	0.23	Very Good	H	VS1	59.4	61	338	4	4.05	2.39
11	11	0.3	Good	I	SI1	64	55	339	4.25	4.28	2.73

# 웹 브라우저를 통한 서비스 시연

## 1. Diamond의 가격 예측

Carat :

Cut

☐ Ideal ☐ Premium ☒ Very Good ☐ Good ☐ Fair

Color

☐ D ☐ E ☐ F ☐ G ☐ H ☐ I ☒ J

Clarity

☐ IF ☐ VVS1 ☐ VVS2 ☐ VS1 ☐ VS2 ☒ SI1 ☐ SI2 ☐ I1

Depth :

Table :

x :

y :

z :

## 2. 가격 예측 결과

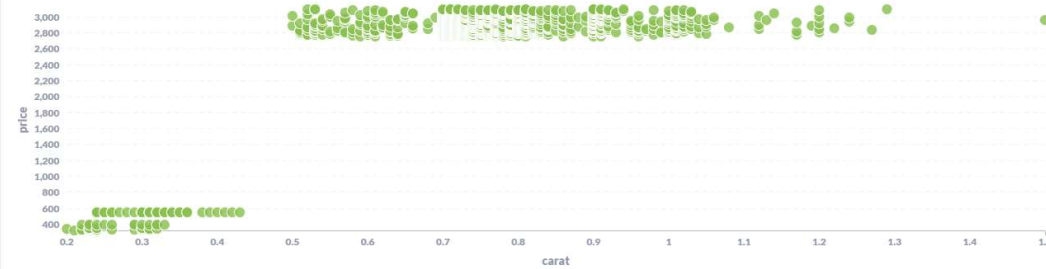
[369.56044048]

<https://dia-app.herokuapp.com/>

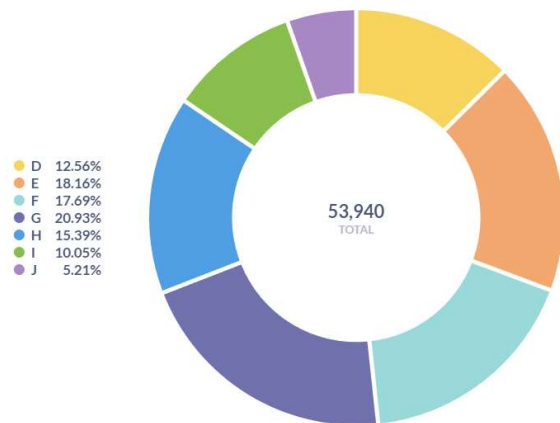
# Metabase dashboard

## Diamond 가격 예측 report

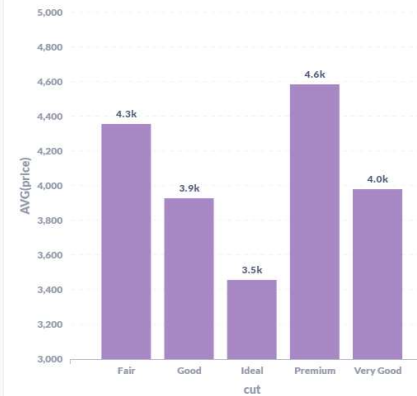
carat-price 상관 관계



color 별 data 수



cut 별 평균 price



# Reflection

유의미한 인사이트 도출을 위한 모델과 주제를 새로 정하지 못한 점이 아쉬움.

Metabase dashboard를 Flask app 내에 탑재하지 못함.

Html로 웹 어플리케이션 구현해본 것은 좋았다.