In [1]:
```
import pandas as pd
from sklearn.datasets import load_wine
```

In [2]:
```
wine = load_wine()
wine_df = pd.DataFrame(wine.data, columns=wine.feature_names)
wine_df['WineType'] = [wine.target_names[t] for t in wine.target]

wine_df.head()
```

Out[2]:

	alcohol	malic_acid	ash	alcalinity_of_ash	magnesium	total_phenols	flavanoids	nonflavanoid_phenols	proanthocyanins	color_intensity	hue	od280/od315_of_diluted_wines	proline	WineType
0	14.23	1.71	2.43	15.6	127.0	2.80	3.06	0.28	2.29	5.64	1.04	3.92	1065.0	class_0
1	13.20	1.78	2.14	11.2	100.0	2.65	2.76	0.26	1.28	4.38	1.05	3.40	1050.0	class_0
2	13.16	2.36	2.67	18.6	101.0	2.80	3.24	0.30	2.81	5.68	1.03	3.17	1185.0	class_0
3	14.37	1.95	2.50	16.8	113.0	3.85	3.49	0.24	2.18	7.80	0.86	3.45	1480.0	class_0
4	13.24	2.59	2.87	21.0	118.0	2.80	2.69	0.39	1.82	4.32	1.04	2.93	735.0	class_0

In [4]:
```
ingredients = wine_df.drop(columns=['WineType']).columns
ingredients
```

Out[4]:
```
Index(['alcohol', 'malic_acid', 'ash', 'alcalinity_of_ash', 'magnesium',
       'total_phenols', 'flavanoids', 'nonflavanoid_phenols',
       'proanthocyanins', 'color_intensity', 'hue',
       'od280/od315_of_diluted_wines', 'proline'],
      dtype='object')
```

In [6]:
```
print(ingredients.tolist())
```

```
['alcohol', 'malic_acid', 'ash', 'alcalinity_of_ash', 'magnesium', 'total_phenols', 'flavanoids', 'nonflavanoid_phenols', 'proanthocyanins', 'color_intensity', 'hue', 'od280/od315_
of_diluted_wines', 'proline']
```

In [8]:
```
avg_wine_df = wine_df.groupby('WineType').mean().reset_index()

avg_wine_df
```

Out[8]:

	WineType	alcohol	malic_acid	ash	alcalinity_of_ash	magnesium	total_phenols	flavanoids	nonflavanoid_phenols	proanthocyanins	color_intensity	hue	od280/od315_of_diluted_wines	proline
0	class_0	13.744746	2.010678	2.455593	17.037288	106.338983	2.840169	2.982373	0.290000	1.899322	5.528305	1.062034	3.157797	1115.711864
1	class_1	12.278732	1.932676	2.244789	20.238028	94.549296	2.258873	2.080845	0.363662	1.630282	3.086620	1.056282	2.785352	519.507042
2	class_2	13.153750	3.333750	2.437083	21.416667	99.312500	1.678750	0.781458	0.447500	1.153542	7.396250	0.682708	1.683542	629.895833

In [ ]: