```
In [1]: import cv2
import numpy as np
from matplotlib import pyplot as plt
In [2]: plt.rcParams['figure.figsize'] = (20, 10)
```

#### 이미지 불러오기

chicken.jpg

```
In [3]: image_chicken = cv2.imread('C:/Users/choye/Python_Application/image/chicken.jpg')
```

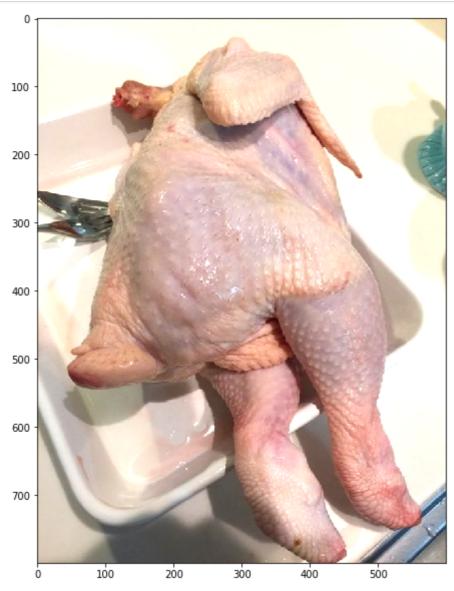
# 원본 이미지 출력

```
In [4]: # 이미지를 출력
plt.imshow(cv2.cvtColor(image_chicken, cv2.COLOR_BGR2RGB))
plt.show()
```



#### 대비와 밝기 조정

```
In [5]: # 대비
alpha = 1.3
# 밝기
beta = 0
image_scale = cv2.convertScaleAbs(image_chicken, alpha = alpha, beta = beta)
# RGB로 변환
img_rgb = cv2.cvtColor(image_scale, cv2.COLOR_BGR2RGB)
# 이미지를 출력
plt.imshow(img_rgb)
plt.show()
```



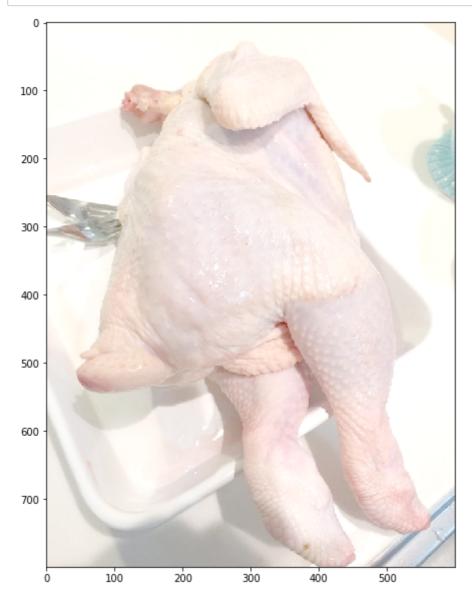
# 감마 조정

```
In [6]: gamma = 0.32

LookUpTable = np.empty((1,256), np.uint8)
for i in range(256):
    LookUpTable[0,i] = np.clip(pow(i / 255.0, gamma) * 255.0, 0, 255)
image_gamma = cv2.LUT(image_scale, LookUpTable)

# RGB로 변환
img_rgb = cv2.cvtColor(image_gamma, cv2.COLOR_BGR2RGB)

# 이미지를 출력
plt.imshow(img_rgb)
plt.show()
```

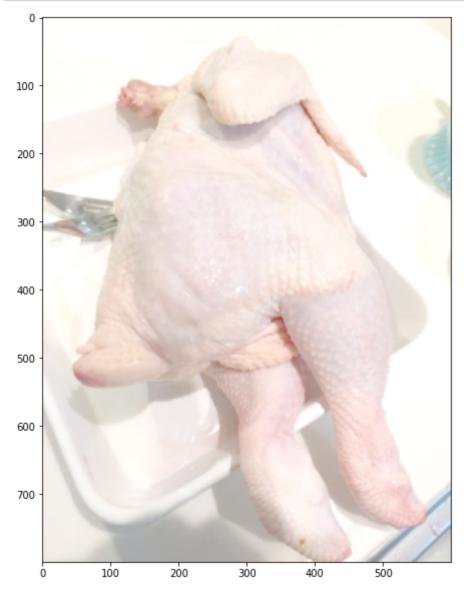


# 정규분포를 이용한 블러

```
In [7]: image_gaus_blur = cv2.GaussianBlur(image_gamma,(5,5),0)

# RGB로 변환
img_rgb = cv2.cvtColor(image_gaus_blur, cv2.COLOR_BGR2RGB)

# 이미지를 출력
plt.imshow(img_rgb)
plt.show()
```



#### **Before / After**

```
In [8]: # 원본 이미지 plt.subplot(1,2,1) plt.imshow(cv2.cvtColor(image_chicken, cv2.COLOR_BGR2RGB)) plt.title('Before', size=30) # 수정 이미지 img_rgb = cv2.cvtColor(image_gaus_blur, cv2.COLOR_BGR2RGB) plt.subplot(1,2,2) plt.imshow(img_rgb) plt.title('After', size=30) plt.show()
```



