# Computer Vision
# fall 2016
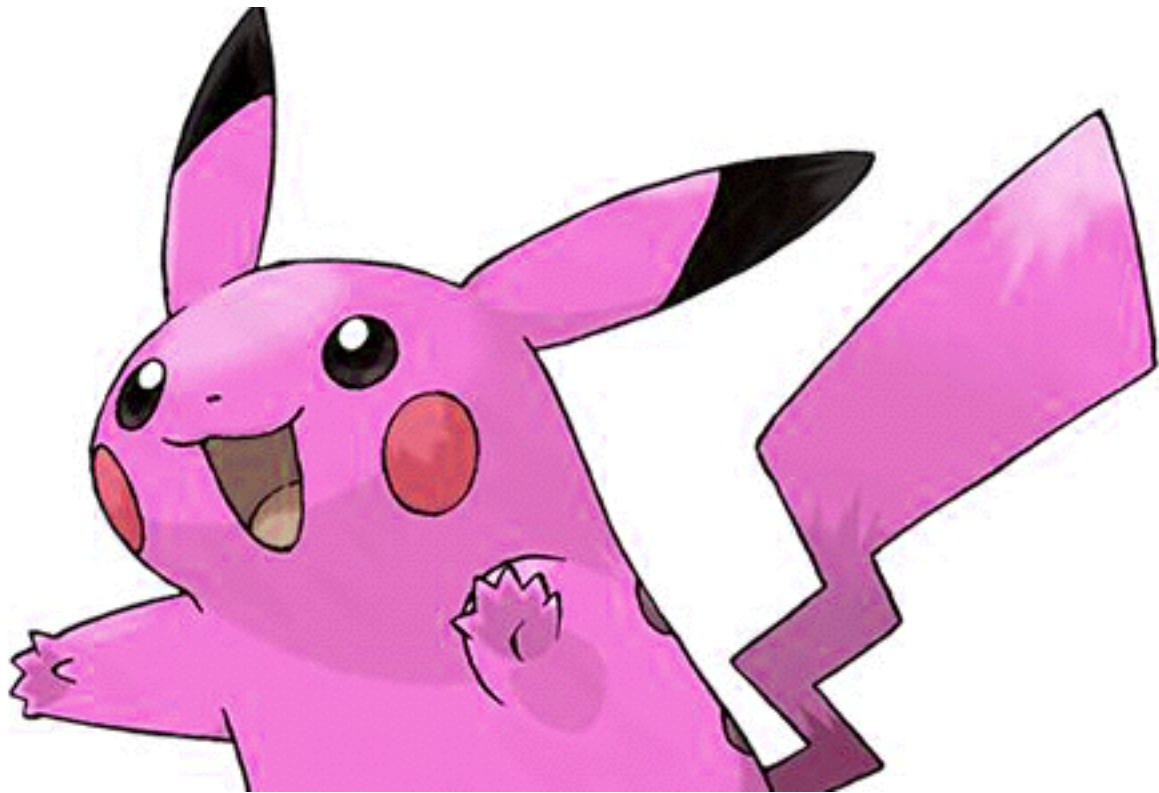# Problem Set #1
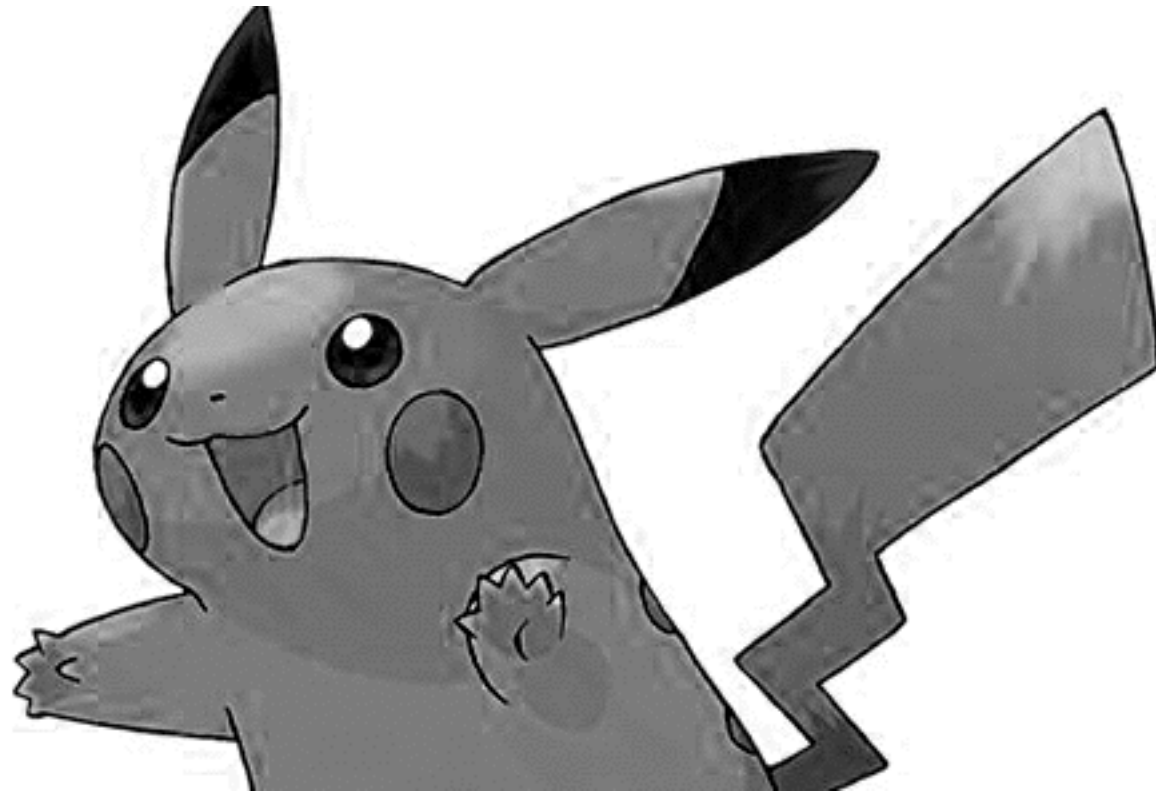
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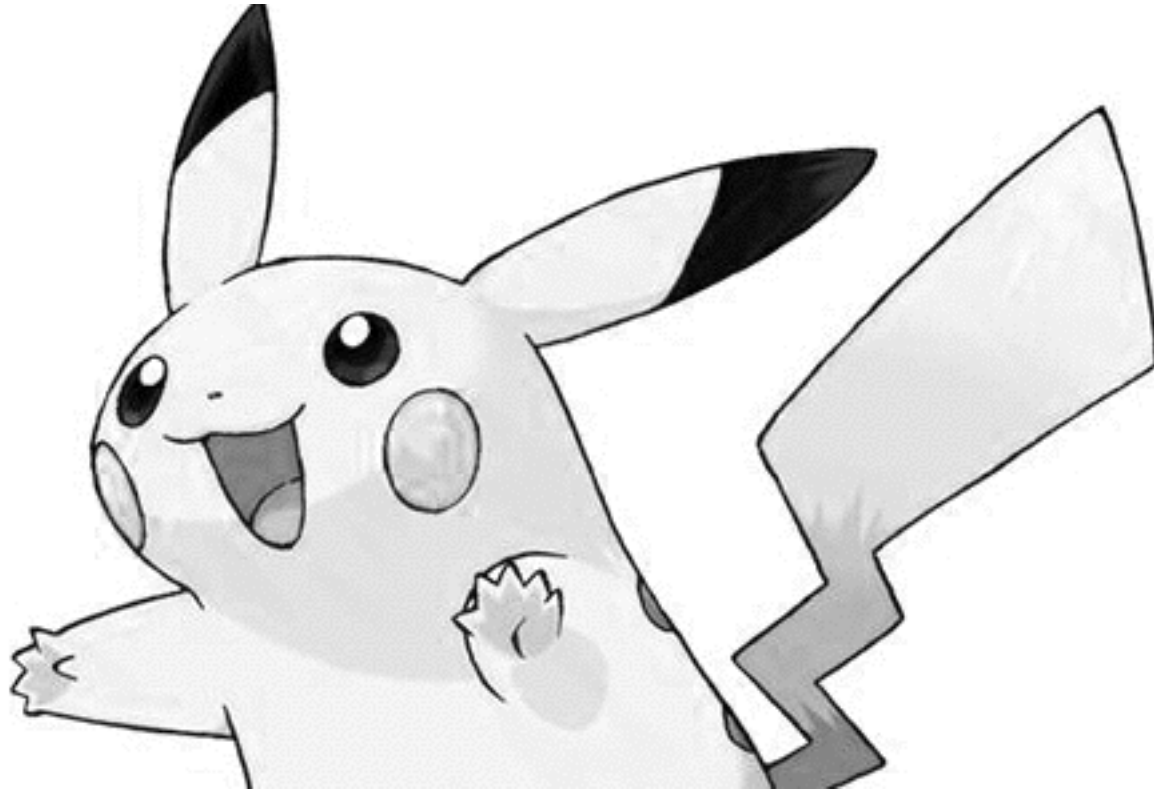# 1a. intersting images
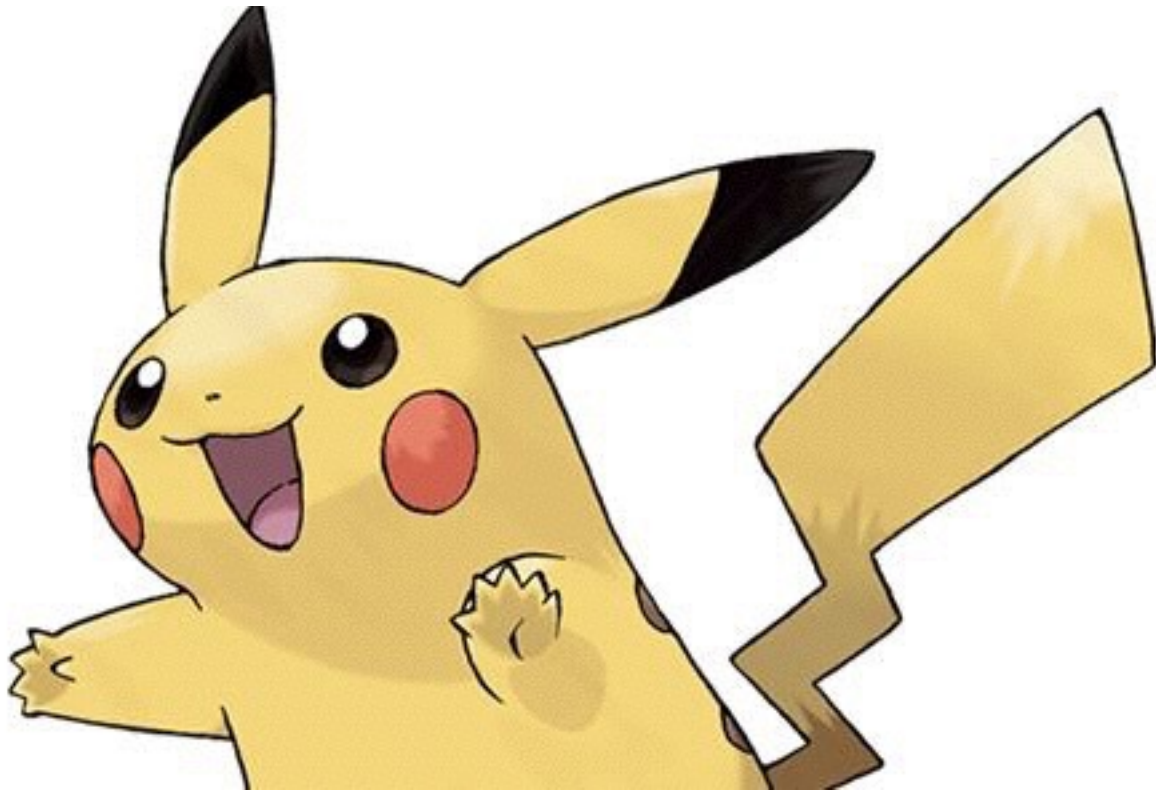
# 2a. swapped green and blue
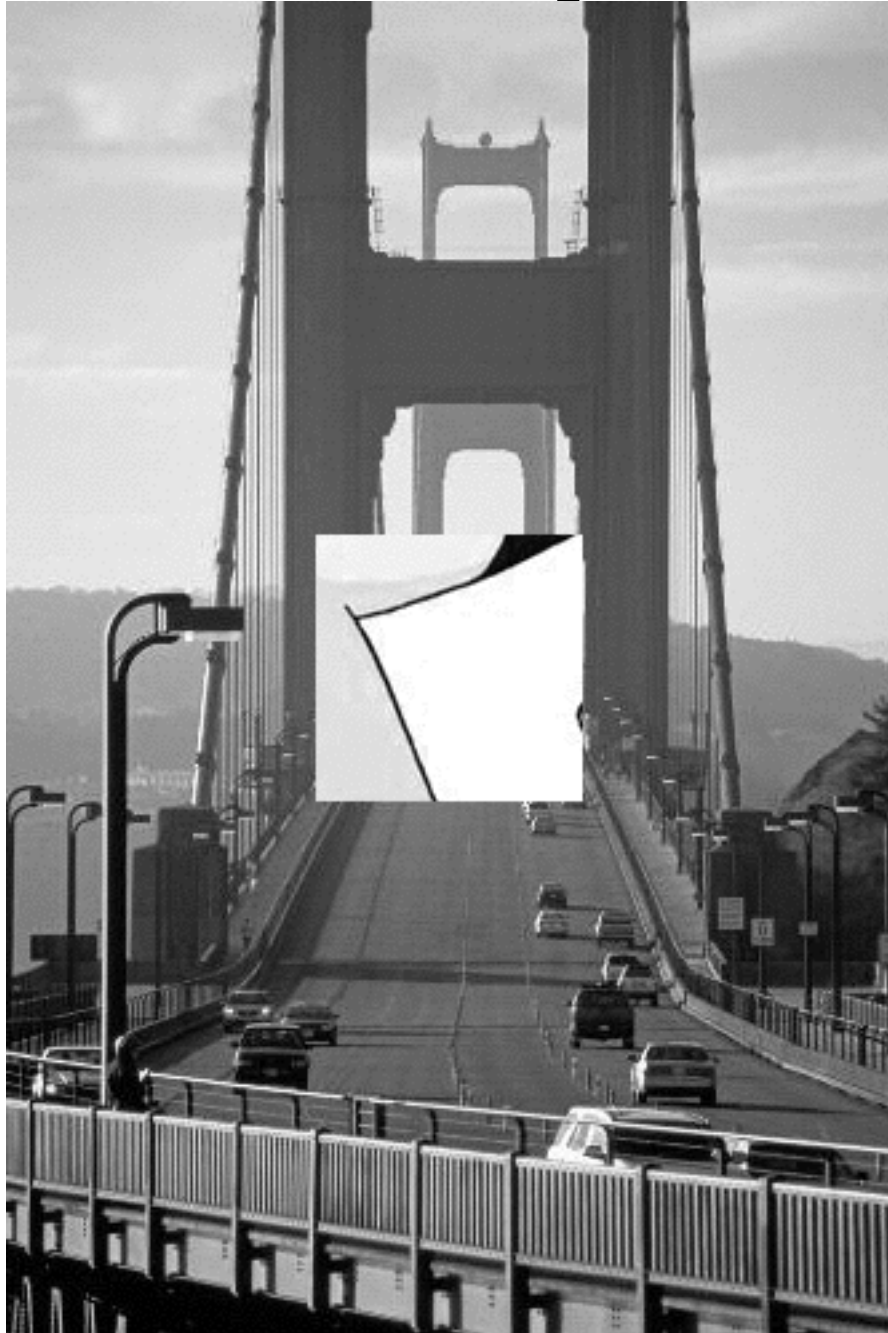


ps1-2-a-1

# 2b. Monochrome Green



**Img1_green - ps1-2-b-1.png**

# 2c. Monochrome Red



**Img1_red - ps1-2-c-1.png**

# 3a. Replacement of Pixels
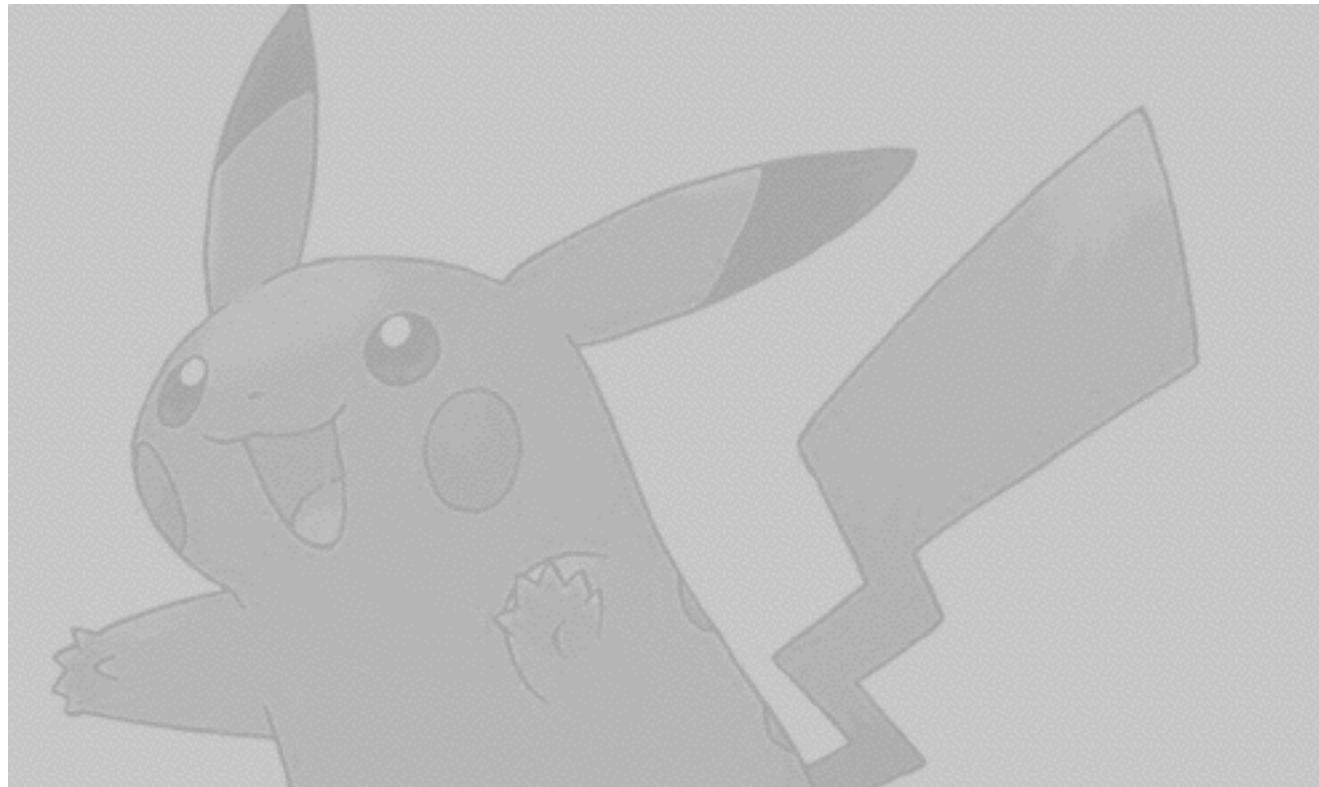


**ps1-3-a-1.png**

# 4a. Image Stats

Min: 0
Max: 255
Mean: 192.461182
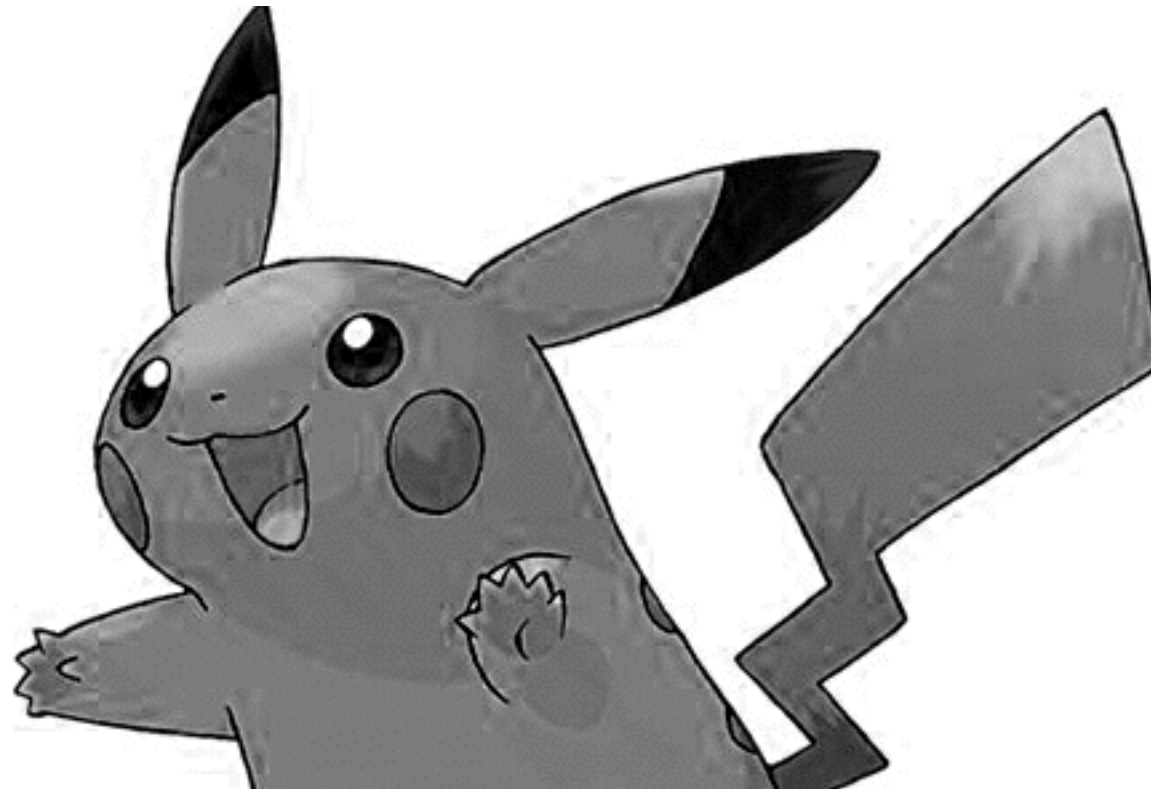Standard deviation: 76.282922

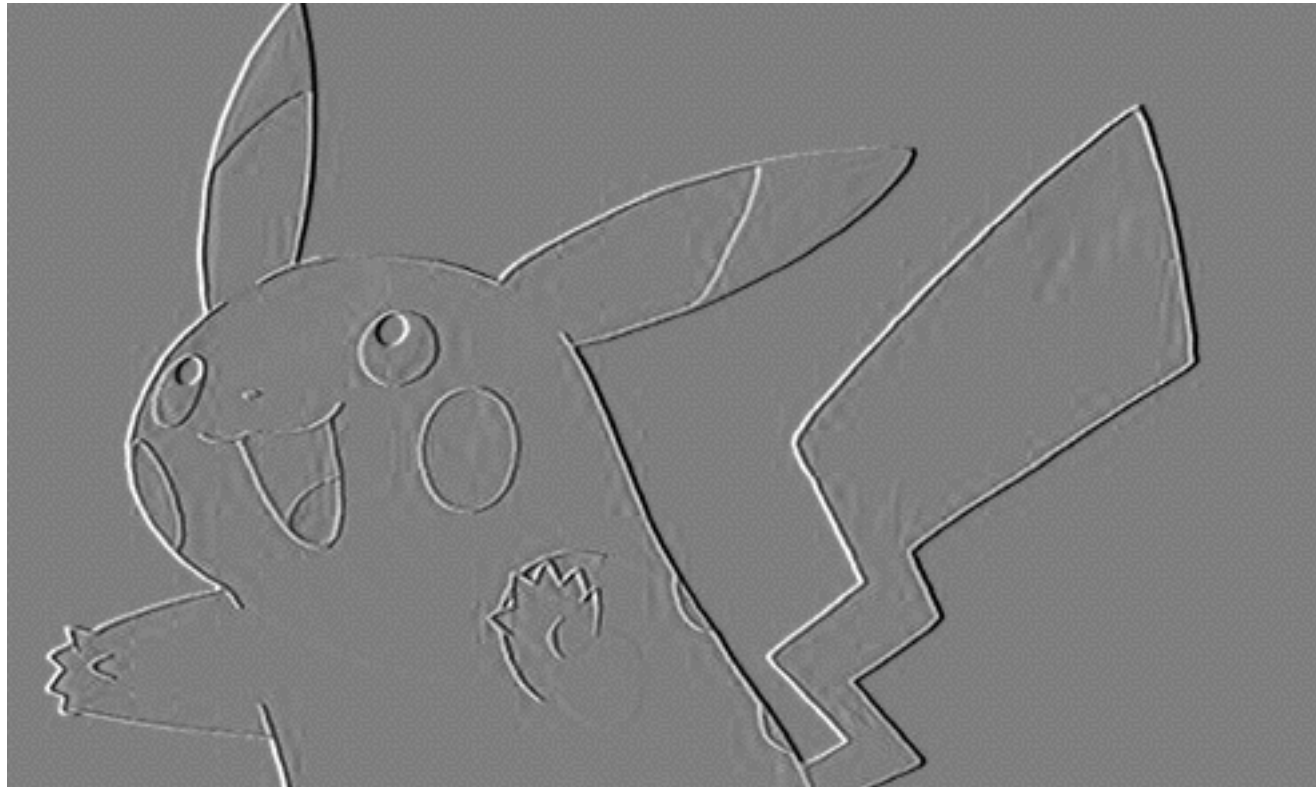# 4b. Arithmetic Operation



**ps1-4-b-1.png**
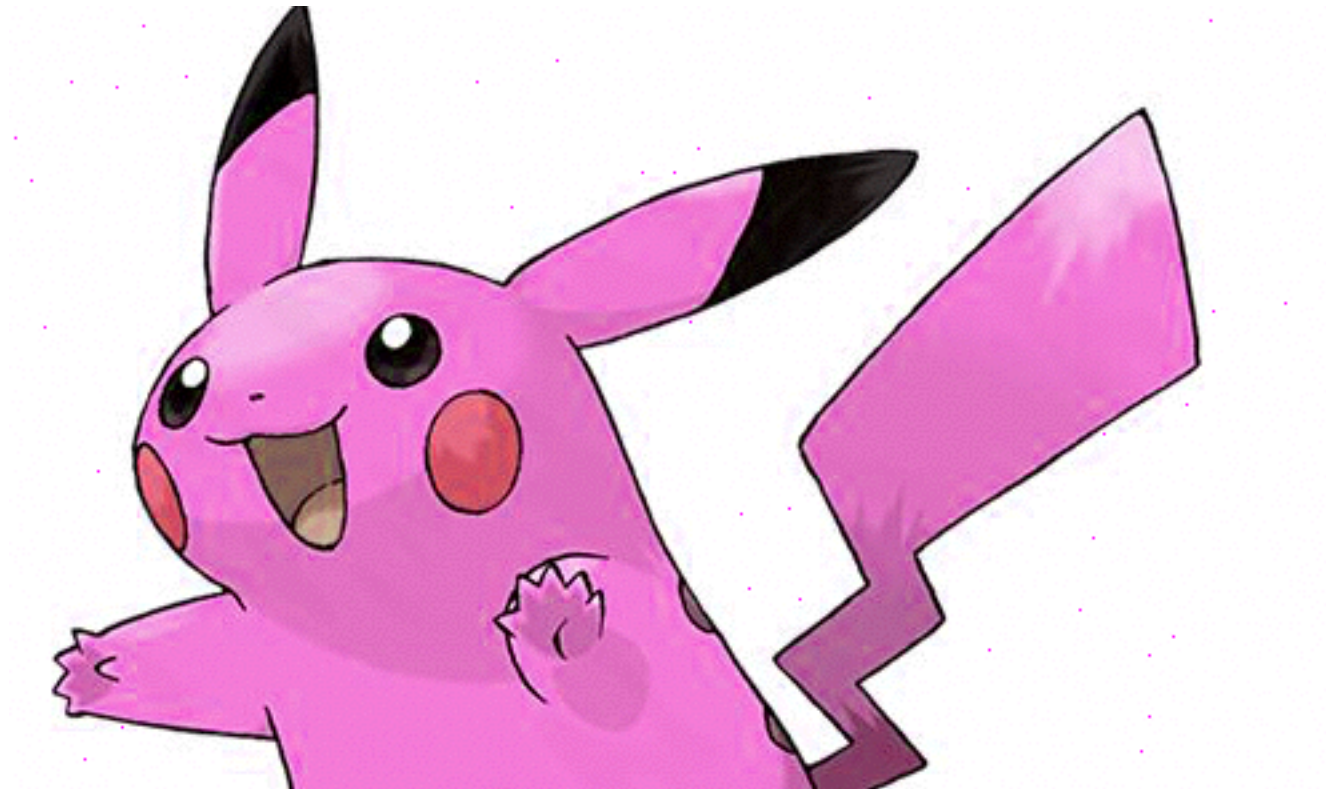
# 4c. Shifted Image



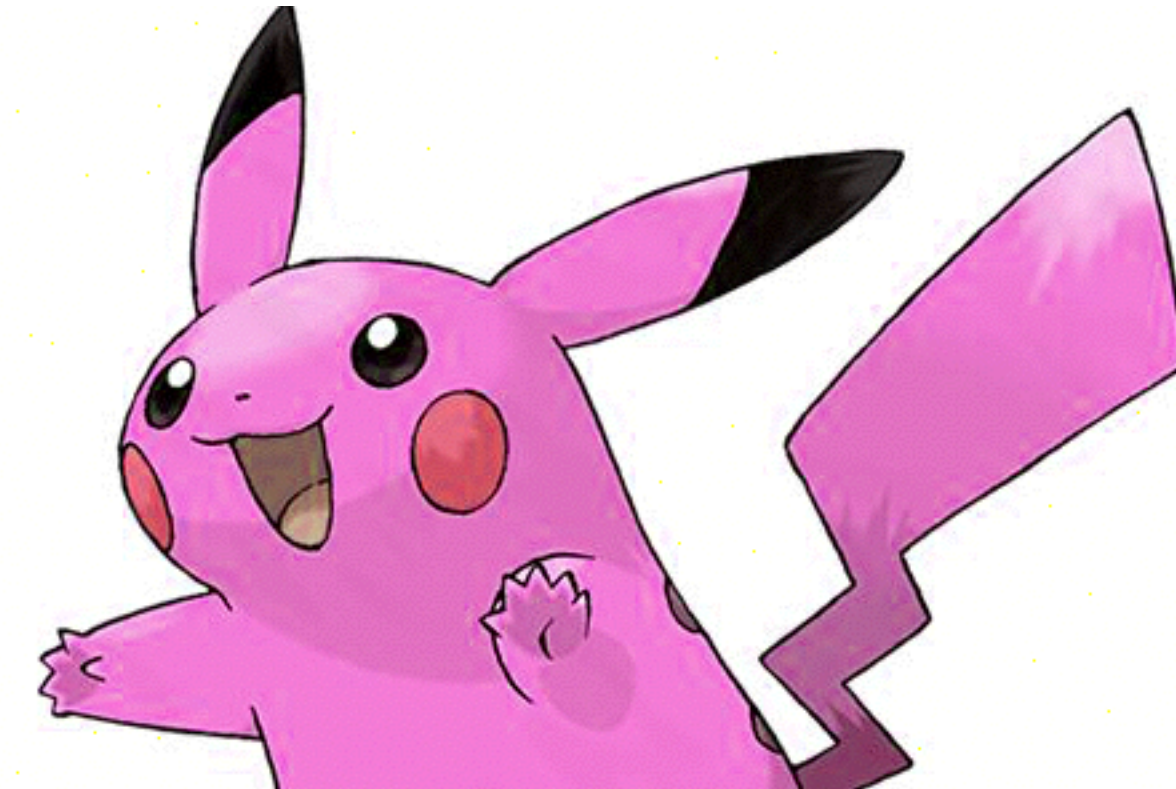**ps1-4-c-1.png**

# 4d. Difference Image



**ps1-4-d-1.png**

# 5a. Noisy Green Channel



**ps1-5-a-1.png**

# 5b. Noisy Blue Channel



**ps1-5-b-1.png**

# 6. Discussion

a. Between these channels, the green channel resembles the most to the grayscale version of the original image, because human eyes are more sensitive to green color than other two colors.

b. Negative pixel values means the color falls out of the predefined range, it's import to maintain negative values to avoid information loss during manipulation of images.

c. The image with noisy blue channel looks better, because human eyes are more responsive to green lights than to blue lights. the sigma used here is 0.3 to detect discernible difference.