**Image Processing:**

Load the provided bunny image for processing.

a. Provide the median pixel brightness of the Red channel.

**RBG\_Red.MedianPixelBrightness = 0.753**

b. Provide a histogram for the Blue channel with appropriate axis labels.

A graph of blue lines

Description automatically generated

c. Perform the following manipulations in series:

i. Rotate the Green channel by 90 degrees CW. Leave Red and Blue as they are.

ii. Apply a gradient filter to the rotated Green channel to highlight edges. If your chosen

gradient method produces negative values, take the absolute value. Normalize 0 to 255

iii. Apply a blurring filter to the gradient filtered Green channel using a kernel size of 21.

iv. Mask the Red channel so that all values > 230 are set to 0

v. Combine the modified Red and Green channels along with the Blue channel into a

greyscale image while weighting the Green channel twice as much as the other two.

vi. Rescale size to 150% and crop out the left half (keeping the right).

vii. Save the final image as a grayscale “[lastname]\_bunny\_out.png”. You will send this out

along with your compiled results.

A close-up of a white object

Description automatically generated