San José State University
Computer Science Department
CS156, Introduction to Artificial Intelligence, Spring 2021

Homework #8

Objective:

This homework's objective is to implement and apply RGB image filters/kernels.

Details:

For this assignment you will be using an image named **china.jpg** available through scikit learn. You will use the following code to load this image:

img = datasets.load_sample_image("china.jpg")

Implement the following filters/kernels that can be applied to 3-channel images:
1. edgeDetectionKernel3channel
2. sharpenKernel3channel
3. blurKernel3channel
4. sobelKernel3channel
5. outlineKernel3channel
6. deblurKernel3channel

You can use code from the following Jupyter notebook as an example:
Intro_to_image_convolution.ipynb

Apply each of the filters to the loaded image. For each filter output the original image and the one with the filter applied, side by side, in a manner similar to my examples in the Intro_to_image_convolution.ipynb notebook.

Submission:

Email your assignment submission to me at Yulia.Newton@sjsu.edu and the grader (Akshay Kajale) at akshay.kajale@sjsu.edu. Make sure to email this submission by 11:59pm on the due date listed in Canvas. Your sent email is the proof of submission. The subject of the email should say "CS156 Assignment 8". In the body of the email list your name as it appears on the class roster and your student ID. Attach to this email both the pdf of your Jupyter notebook, which contains the solution for this homework assignment, as well as the notebook itself (the notebook file with .ipynb extension). Make sure to submit both files, otherwise the submission will not be considered complete.

Grading:

I will return the grades as fast as we can grade this homework. Normally it should not take more than a few weeks.

A total of 5 points are possible for this homework assignment.