

Deadline: 25th August 2023 11:59 PM

Marks: 35

Q1. Apply different filters mentioned below on the image attached (or Einstein image if not found attached) and analyze the impact of them. Describe what you found after applying each filter and why certain phenomena are happening.

a	b	c
d	e	f
g	h	i

The 5 filters can be derived after putting 1 at 5 different locations (one at a time). The locations are -> e, f, d, g, and c. For example, one filter where e = 1

0	0	0
0	1	0
0	0	0

Q2. Apply the following filters on the same image.

1	0	-1	1	2	1
2	0	-2	0	0	0
1	0	-1	-1	-2	-1

Q3. Apply the average filter and Gaussian filter of size 3\*3 on the same. One example of a filter is

$\frac{1}{9}$	1	1	1
	1	1	1
	1	1	1

Submission: All are mandatory. Plagiarism and copying from anywhere (similar submission) can debar you from this course and invite the academic dishonesty policy.

1. A report reflecting on what you have learned after different filters on the same image. In the report mention the filters you have used.
2. Submit your code
3. A short 5-minute video explaining your output/understanding.