**Task 2.1P Answer sheet**

Fill in the “**Results**” column with relevant results

**Notes**:

* Missing any required results will result in a re-submission.

|  |  |
| --- | --- |
|  | **Results** |
| **Filtering using Gaussian kernel** |  |
| **Filtering using corner kernel** |  |
| **Median filtering** |  |
| **Bilateral filtering** |  |
| **Horizontal derivative image (i.e., der\_x)** |  |
| **Vertical derivative image (i.e., der\_y)** |  |
| **Gradient magnitude image (i.e., mag\_img\_gray)** |  |
| **Canny edge image (i.e., Canny\_edges)** |  |

**Discussion**

|  |
| --- |
| Areas of intensity change are shown in the gradient magnitude picture created by the Sobel filter. This technique is easy to use and straightforward, but it creates wider edges and is prone to noise. On the other hand, the Canny edge detector uses a combination of noise reduction, edge tracking using hysteresis, and gradient computation. Canny generates edges that are more consistent, clean, and sharper as a result. For edge detection tasks, its robustness and dependability are increased by its capacity to filter out weak and isolated gradient responses. |
|  |