Machine Vision

HW#4

Deadline: 2023/05/11 23:59

RVL Room 1421

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HW#4

- Image filtering
  - **Every problem you need to repeat 7 times.**

  1. Implement Mean Filter with 3*3 and 7*7 mask.
  2. Implement Median Filter with 3*3 and 7*7 mask.
  3. Implement Gaussian 2D Filter with 5*5 mask.
     - Define your σ and describe your Gaussian kernel.

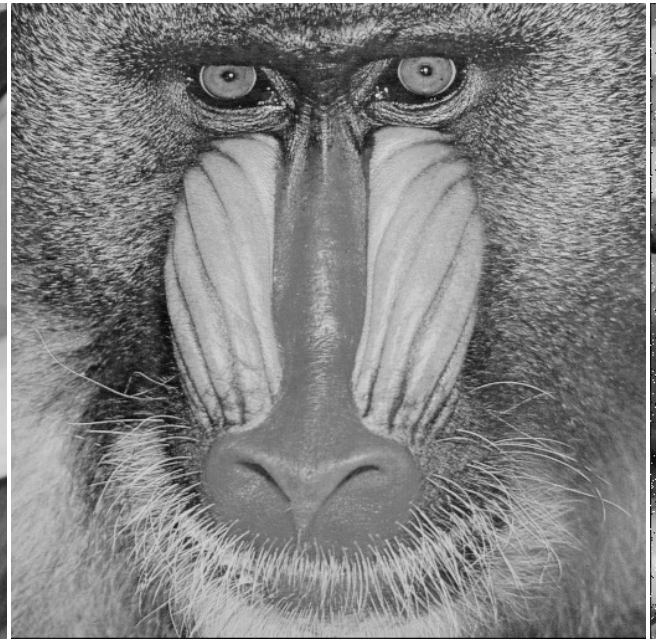
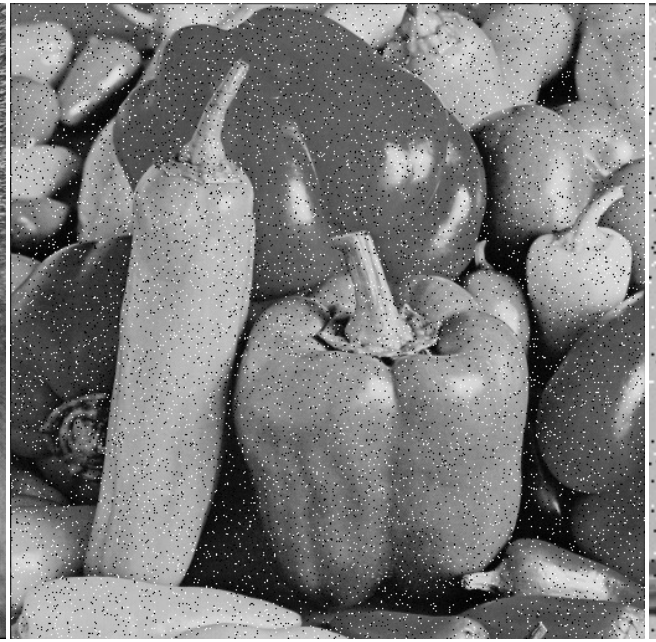
HW#4

- Bonus: Discuses the result after repeat 7 times in your report.

1	2	…	6	7
		…		?

HW#4

- Download images


HW#4

- **Use OpenCV-2.x version**
- Allow use OpenCV for C/C++
  - Read, load, save, show: cvLoadImage, cvShowImage …
  - Define size of image: cvSize, cvGetSize
  - Define image: IplImage or Mat
- Not Allow use
  - Cannot use the function of OpenCV Lib to do the main part of homework.
  - Example:
    - cvtColor(image, gray, CV_RGB2GRAY); // convert RGB to Gray

HW#4

- Require for program
  - GUI to read, display input and result images is encouraged (but not required).
  - **Use C/C++**
  - Write homework on the one program (using class or subprogram).

HW#4

- Grade
  - Program (80%)
    - 1 (25%)
    - 2 (25%)
    - 3 (30%)
  - Report (20%)

HW#4

- Report needs:
  - Student ID
  - Name
  - Describe the main part of your method
  - Result images (140 pics)
    1. 4*2*7 imgs
    2. 4*2*7 imgs
    3. 4*1*7 imgs

HW#4

- Submit **studentID_hw4.zip** include:
  - The program source code and result images
  - The report (.pdf)
  - Mail to TAs
- **Deadline: 2023/05/11 23:59**
  - For each hour late, 10% of the total possible points will be deducted.
  - Don’t share your code with other students.