

## Assignment 2

### CPS592 –Visual Computing and Mixed Reality

**Released Date: 10/16/2016**

#### Requirements

In this assignment, you will implement to solve the basic problem in visual computing.

Write MATLAB code to implement the bilateral filtering with three methods

- Brute force (refer to Lab 4)
- Separable Kernel
- Box Kernel

Analyze the pros and cons of each method, for example:

- The processing time of each method. Which method is the fastest?
- The filtering results. Which method gets more artifacts?
- Bad and good examples.
- Your own observation/comments.

Hint: The processing time can be measured by using two functions, *tic* and *toc* in MATLAB.

#### What to Submit

1. A well-documented program that implements the problem in the Assignment 2. You must submit your program source code.
2. A well-written, concise project report. It should include: (a) title and names of group members; (b) the problem analysis; (c) the issues during the implementation; (d) the solutions to overcome the issues in (c); (e) the contribution of each individual member
3. The powerpoint slides (maximum 20 slides) used in the Assignment grading on 11/9 and 11/11.

For each group, you must submit the files above in a single zipped folder. Your group will be required to do a presentation in classroom on 11/9 or 11/11 for the grading.

Note: If you cannot submit zipped file to isidore, please change the filename extension to doc or docx and then submit it.

**Submission Due: 11:55pm, November 6, 2016**