Digital Image Processing

Spring Semester, 2015 Junior, Computer System Engineering

Course Title	Digital Image Processing	Classification	-	Major	Optional	Credits (Hours)	3 (3)
Lecture Hours	Wednesday 3:00~5:50	Room	I-502(Lecture) C-316(Lab)	Office Hours	Tuesday 4:00-4:50		
Professor	Jung, Minchul	Office	Hanuri I-611	Phone & Email	041-550-5361 mjung@smu.ac.kr		

Course Description

This course introduces the various algorithms in digital image processing such as point process, area process, geometric process, and frame process. The aims of this lecture are the studies of both the algorithms of digital image processing and the implementation of the algorithms in embedded UNIX system using C programming.

Prerequisites : Computer programming I,II, UNIX system.

Note : Students are required to give several individual presentations throughout the course.

Textbook and References

· Textbook: Digital Image Processing, Principles and Applications, Gregory A. Baxes, John Wiley & Sons, 1994.

· References

1. Fundamentals of Digital Image Processing, Anil K. Jain, Prentice Hall, 1988.
2. Computer Vision: Algorithms and Applications, Richard Szeliski, Springer, 2010.

Grading

· Midterm Exam: 30%

· Final Exam : 40%

· Homework & Presentation: 20%

· Attendance : 10%

Week	Topics	
1	Orientation of Digital Image Processing	Lecture
2	Image Point Process(1)	Lecture
3	Image Point Process(2)	Lecture
4	Image Point Process(3)	Lecture
5	Image Area Process(1)	Lecture
6	Image Area Process(2)	Lecture
7	Image Area Process(3)	Lecture
8	Midterm Exam	Evaluation
9	Image Geometric Process(1)	Lecture
10	Image Geometric Process(2)	Lecture
11	Image Geometric Process(3)	Lecture
12	Image Frame Process(1)	Lecture
13	Image Frame Process(2)	Lecture
14	Image Frame Process(3)	Lecture
15	Final Exam	Evaluation