Digital Image Processing

# Announcements

Spring 2023

# Lecture 01

# Lecture 01

- **Class Information**
  - 13:20 ~ 16:10, Wednesday @102
  - Class website
    - NTU COOL: https://cool.ntu.edu.tw/courses/26661
    - Lecture #1
    - Student Information Form (Mail to TA by Feb. 23 )
- **Teaching Assistant**
  - 許喬茵 & 侯宥任 @532
    Office Hours: 12:00 ~ 14:00, Tuesday
    13:00 ~ 15:00, Thursday
  - Email: dip.mslee@gmail.com

# Lecture 01

- **Textbook:**
  - William K. Pratt: Digital Image Processing, 3rd Edition, John Wiley & Sons Inc., 2001.

- **Reference Books:**
  - D. E. Dudgeon and R. M. Mersereau: Multidimensional Digital Signal Processing, Prentice Hall, 1984.
  - Anil K. Jain: Fundamentals of Digital Image Processing, Prentice Hall, 1989.
  - J. S. Lim: Two-Dimensional Signal and Image Processing, Prentice Hall, 1990.
  - Rafael C. Gonzalez and Richard E. Woods: Digital Image Processing, Prentice Hall, 2010.
  - Ronald N. Bracewell: Two-Dimensional Imaging, Prentice Hall, 1995.
  - Kenneth R. Castleman: Digital Image Processing, Prentice Hall, 1996.

# Lecture 01

- **Homework Related**
  - There will be 5~6 assignments
  - NTU COOL and Gradescope (Entry Code: 8NWB4J)
  - All assignments require programming
  - Due at 11:59 pm (midnight) on the due date
  - Note
    - may discuss but no duplicating
    - TA's NOT responsible for debugging
    - No late homework will be accepted. Plagiarism is strictly prohibited

- **Grading Policy**
  - Homework: 40%
  - Midterm Exam: 30%
  - Term Project: 30%

# Lecture 01

- **Tentative Schedule**
  - Introduction and Digital Image Fundamentals
  - Image Enhancement in Spatial Domain
  - Edge Detection
  - Geometrical Modification
  - Morphological Processing
  - Digital Halftoning and Inverse Halftoning
  - Texture Analysis
  - Document Processing
  - Image Sampling and Transforms
  - Image Enhancement in Frequency Domain
  - Color Image Processing
  - Image Compression

# Lecture 01

- **Tentative Schedule**

| Date | Content | Date | Content |
|------|---------|------|---------|
| 02/22 | Lecture 1 | 04/19 | Lecture 7 |
| 03/01 | Lecture 2 | 04/26 | Proposal |
| 03/08 | Lecture 3 | 05/03 | Lecture 8 |
| 03/15 | Lecture 4 | 05/10 | Lecture 9 |
| 03/22 | Lecture 5 | 05/17 | Lecture 10 |
| 03/29 | Lecture 6 | 05/24 | Demo |
| 04/05 | Spring Break | 05/31 | Demo |
| 04/12 | Midterm | 06/07 | Final Package Due |

# Lecture 01

- **Others**
  - 加簽
    - **網媒所博士班同學優先**，其餘的再進行抽籤決定
    - 請有修課意願的同學掃右方QR code填寫表單
    - 登記截止時間為 **2/22 16:10**

  - 旁聽
    - 本課程一律不開放旁聽
    - NTU COOL也不會增設旁聽帳號給同學

# Lecture 01

- **Student Information Form (Due on )**
  - Name, Student ID and Department
  - Email address
  - Your portraits
    including a sketch and a photo, both 512 x 512
  - Why do you want to take this course? What do you expect to learn?
  - What do you want to do in the Final Project?

- Students who registered already
  Submit to NTU COOL
- Students who has not registered
  Email TA: dip.mslee@gmail.com
  [DIP] Student xxxxxx