# Mathematical Foundations for Computer Vision and Machine Learning

Byung-Woo Hong

Computer Science Department, Chung-Ang University

### Python 3

- Install the latest version of Anaconda
- Install the latest version of Jupyter Notebook
- Install IDE for Python 3 (e.g. Visual Studio Code)
- Learn how to use the above techniques and tools

#### Jupyter Notebook

- Create a new notebook for Python 3
- Include your name and the student ID in the notebook
- Write python 3 codes for the given assignment
- Write a short description for each block of codes
- Use LaTeX for mathematical comments in the notebook
- Save the notebook file as assignment02.ipynb
- Download the notebook as a PDF file assignment02.pdf

#### Python Programming - Taylor Approximation

- Define a two dimensional differentiable function
- Define the derivation of the given function
- Define the domain of the function
- Pick 3 points in the domain
- Plot the graph of the defined function
- Plot the graph of Taylor approximation for the given function at the given points

#### github

- Start a project with the name assignment02
- Upload the notebook file assignment02.ipynb to the project

#### Submission to eclass

- Submit the PDF file assignment02.pdf to eclass
- Deadline is 11:59 pm on next Thursday. No extension
- Score ranges from 0 to 5
- Plot important intermediate results
- Add comments on each block of codes and results