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# Image Processing & Vision (55397)

## Homework II: Edge Detection

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- **Tasks:**

1. Implement 3x3 Sobel edge filters in horizontal and vertical directions and perform edge detection with the implemented Sobel edge filters
2. With the horizontal and vertical edges (i.e., image gradients), calculate the magnitude and orientation (angle) of the gradients

- **Due: 12 April (Wed) at 11:59 pm**

- **Submission**

- Python code file  
(file name & format: ipv23\_hw02-[student number](#).ipynb)
- Report: No template & Page limit: 4 pages in Korean/English  
(file name & format: ipv23\_hw02-[student number](#).pdf)
- Upload the zip file including python code and report to “과제 및 평가” on E-class  
(file name & format: ipv23\_hw02- [student number](#).zip)

- **References**

- [Python] [https://numpy.org/doc/stable/user/absolute\\_beginners.html](https://numpy.org/doc/stable/user/absolute_beginners.html)