Project 1:
Edge Detection

Input command

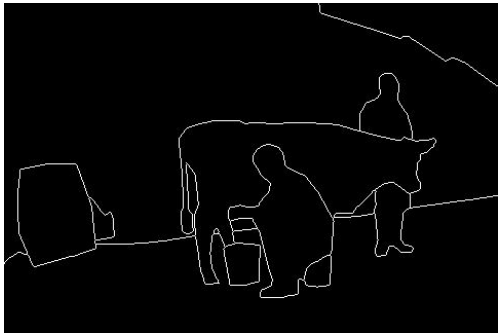
- Python main.py –-input input_list.txt -–output output_list.txt
  - Input file names in “input_list.txt” must be written as an **absolute file path**.
    - e.g.)

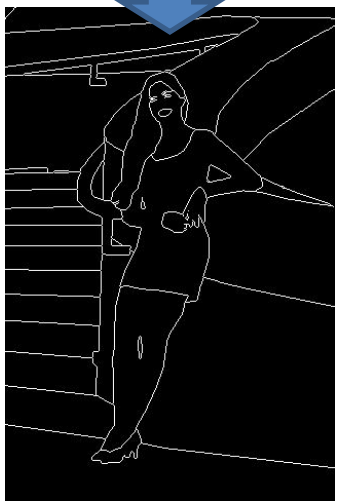
```
D:\\\\2017-1\\ComputerVision\\Project2\\test_images\\001.jpg
D:\\\\2017-1\\ComputerVision\\Project2\\test_images\\002.jpg
D:\\\\2017-1\\ComputerVision\\Project2\\test_images\\003.jpg
D:\\\\2017-1\\ComputerVision\\Project2\\test_images\\004.jpg
```

  - Output file names in “output_list.txt” must be written as an **absolute file path**.
    - e.g.)

```
D:\\\\2017-1\\ComputerVision\\Project2\\results\\001.jpg
D:\\\\2017-1\\ComputerVision\\Project2\\results\\002.jpg
D:\\\\2017-1\\ComputerVision\\Project2\\results\\003.jpg
D:\\\\2017-1\\ComputerVision\\Project2\\results\\004.jpg
```

Output: example





Criteria

- 80 pts: F-measure (%) & Duration (sec)
  - F-measure = 2*precision*recall/(precision+recall)
  - Precision = #true positive/(#true positive + #false positive)
  - Recall = #true positive/(#true positive + #false negative)
  - You can refer this: https://en.wikipedia.org/wiki/F1_score
- 20 pts: Report
  - Algorithm details
  - References if exist

Miscellaneous

- if (Duration per image > 1 min)
  it will not be graded;

- Evaluation environment
  - i7-6700, 16GB RAM, Win 10 8.1 Enterprise x64
  - Python 3.5.2
  - Numpy
  - skimage

CAUTION

- You can use provided images to design your model.
  - Test images are similar with the provided images.
- Using publicly available code will get 0 credits.

CAUTION2

- DO NOT USE OPENCV

- If you want to use additional package,
  - Ask for permission of TA via email.
  - It will be shared to other students via YSCEC
  - It should be easily installed via pip

Miscellaneous

- Due: May 4th 23:59
- Delayed submission will **NOT** be accepted.
  - i.e., delayed =not submitted