Gebze Technical University
Computer Engineering Department
2019-2020 Fall CSE464/564
Homework 2 v2

There is a special class of morphological filters: path openings and closings. They are capable of filtering thin and oriented structures based on their length:

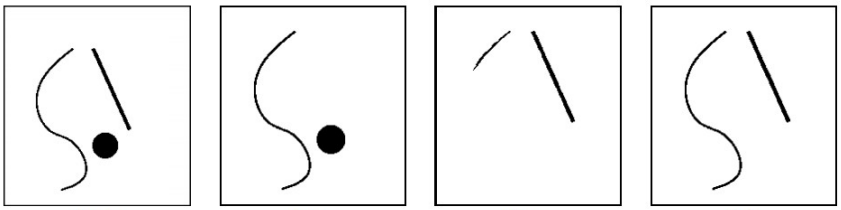

Fig. 1. Toy example: on the input we wish to retain the line-like features while eliminating compact noise. Only the path opening works in this case.

Since you are so skilled with finding stuff online, then please go ahead. Find any and all leads and resources on this topic and implement (in Java, Python or C/C++) a path opening filter. Submit a working demo and its source, that accepts a digital image as input, performs path opening on it and returns the result as output.

Grading

50 points it your code works with binary images.

100 points it your code works with binary and grayscale images.

Here is a starting point: Talbot and Appleton, Efficient complete and incomplete path openings and closings, IMVC, 2007 (**You can access scientific publications using various search engines such sciencedirect, ieee explore and google scholar through the campus internet connection**).

Good luck.