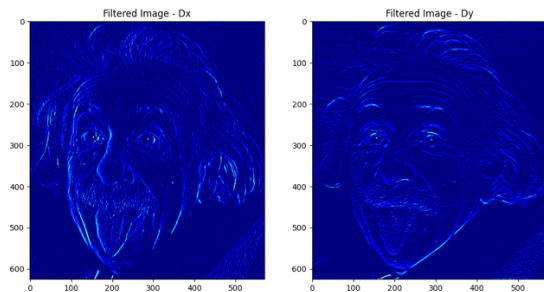# Artificial Intelligence HW2 summary
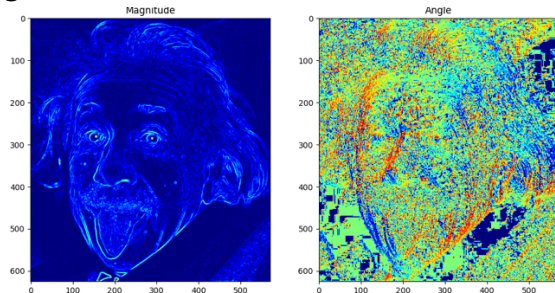
2023-11398 Sukmin Yun

1. Introduction

In this homework, we extract HOG feature from the given images. And using HOG descriptor, we will design a face detection algorithm. The results are as follows.
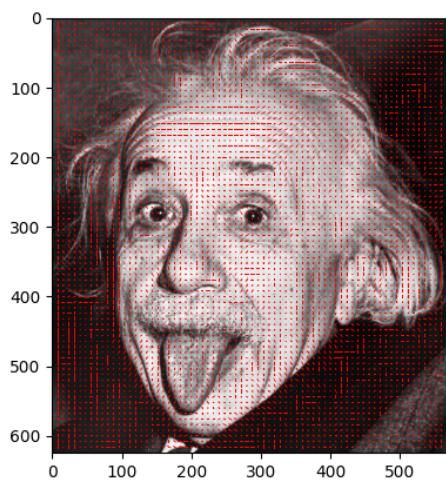
2. HOG visualization

2.1.1 Differential image along x and y directions.
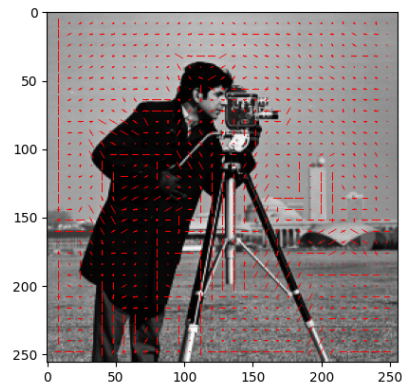

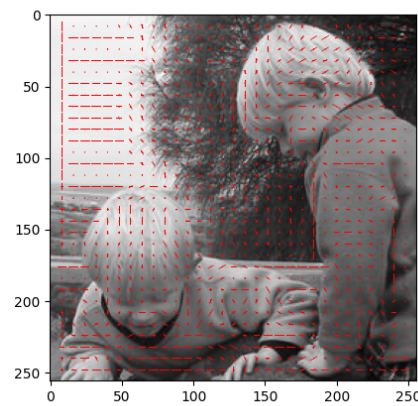2.1.2 magnitude and orientation of image gradients.
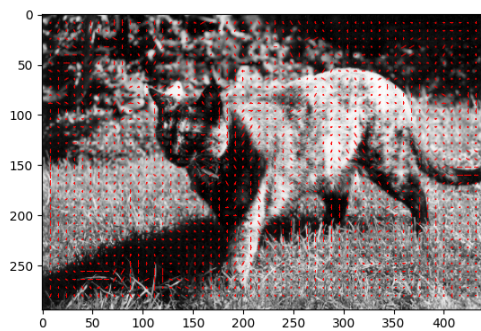

2.1.3 HOG of "einstein.png"

2.2 HOG of "cameraman.tif"

2.3 HOG of "twins.tif"

2.4 HOG of "cat.tif"

3. Application: Face Detection