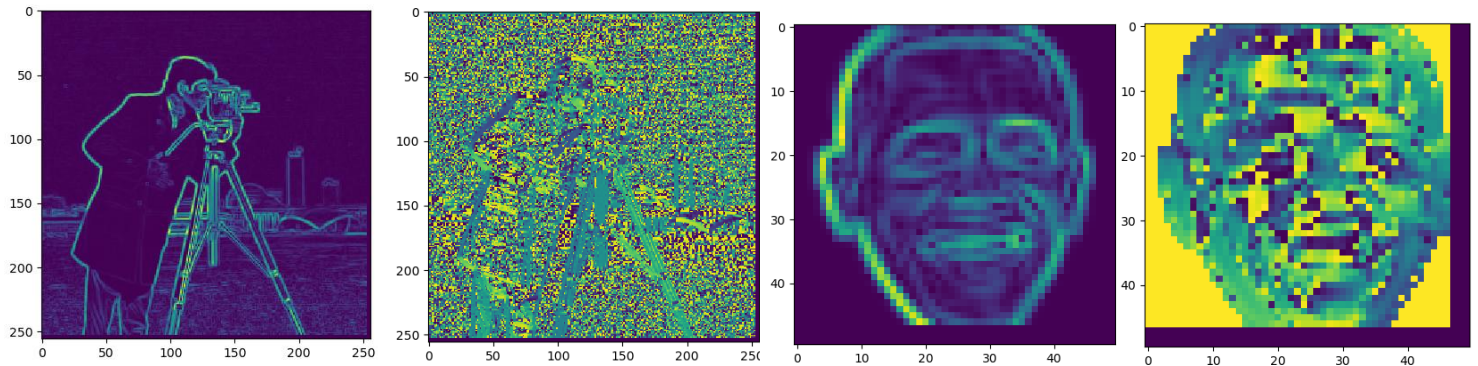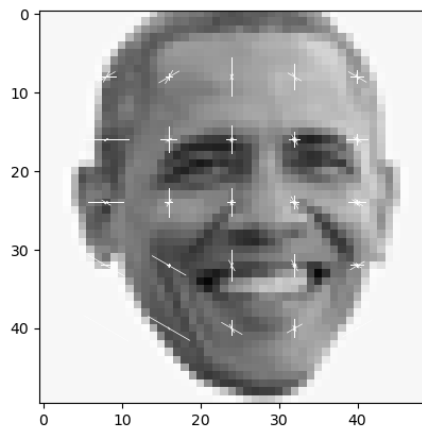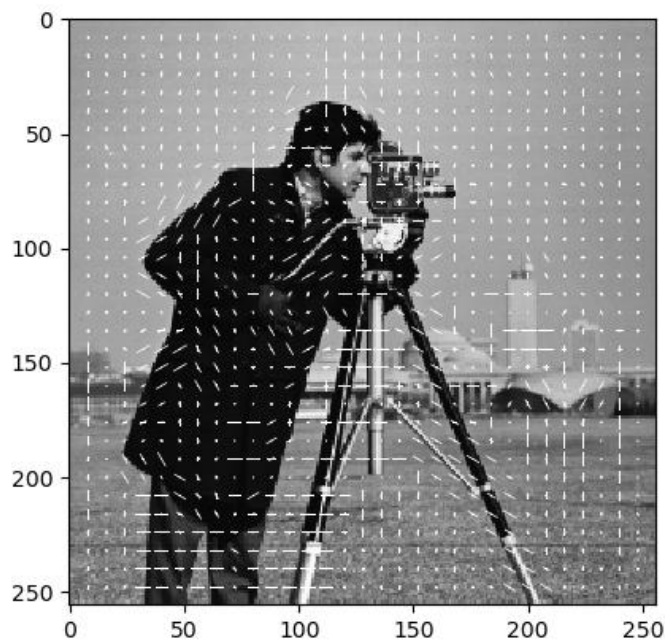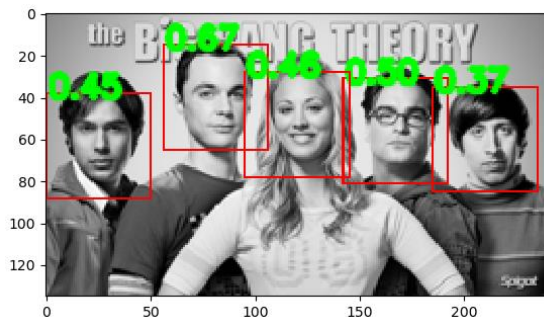Dillon McMahon

CSCI 5561

Homework 1

Gradient images:

HOG:

Final Result:

The result of the program correctly identified each face in the target image. Gradient magnitude and gradient angle for both cameraman.tif and template.PNG are pictured above. The HOG descriptors for both images are also pictured above. The final result detected the face of Sheldon with the highest correlation and Howard with the lowest correlation. Sheldon likely had the highest correlation since the orientation of his head and hair most accurately resembled Barrack Obama. Howard likely had the lowest correlation since his hairstyle covers his forehead and this likely resulted in a slightly different gradient than that of Barrack Obama's forehead.