**Final report**

Starting out on this project things were going well. I was able to successfully run the basic\_classifier.py file an returned the following results for both the basic cat image as well as an image I found of a squirrel(test1.jpg).

Top-3 Predictions(Basic\_Cat.jpj):

1: tiger\_cat (0.35)

2: tabby (0.34)

3: Egyptian\_cat (0.07)

Top-3 Predictions(test1.jpg):

1: red\_wolf (0.13)

2: red\_fox (0.10)

3: Irish\_terrier (0.10)

Once I moved onto the Implement Grad-CAM and Image Occlusion steps, that’s where I ran into issue running the program successfully. I did attempt to modify the program based on suggestions from AI. I also attempted to work through errors. However, I was not able to get the program to run successfully in time before submission. At this point I cannot record my observations on the effectiveness of occlusion and use of Grad-CAM. I plan to continue working on this project to learn what was intended even after grading.

With that said, I was able to successfully run the basic\_filter program as well as implement a modified version with 3 different filters suggested by AI and an additional filter of my own.