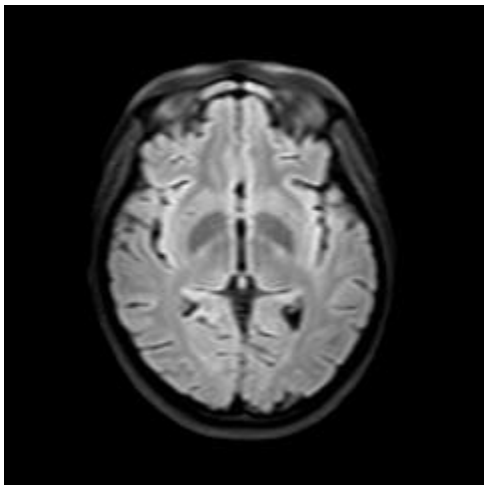
CS 450 Computer Vision and Machine Learning (Spring 2025)

Extra-Credit 24-hour Assignment

Use Jupyter Notebook for the following exercise(s) and upload your notebook with the outputs. You can use stuff given in class for help. As with Extra credit assignments before, I am more interested in seeing your approach rather than the solution. **Upload ONE SINGLE notebook with both solutions.**

1. Write a Python function called selectiveColor(img, col, margin) which takes a color image img, a color col(of the form [r,g,b]) and an integer margin. The function must convert all those pixels of img to gray whose color is at an Euclidean distance > margin from col. Return this new image. **[10 points]**



2. Look at the above image (also uploaded as a separate file). Write a python function called crop(img) that takes in the image and returns it with the black area on the sides closely cropped. The image will still be rectangular, so obviously there will be black regions in the corners. But the edge of the head scan should touch the horizontal and vertical edges of the returned image. **[10 points]**