Mini Project: Computational Art

Reflection

Going into this project, I was worried about my ability to effectively and systematically debug issues I faced with recursion. However, this process went quite smoothly! As is the best quality of recursion, I was able to implement what I thought *should* work logically, and allow the calls to take care of the rest of the work for me! Of course, I faced some roadblocks (e.g., errors from recursion not being passed two calls to evaluate_random_function), but with carefully-placed print statements and slowly incrementing from the lowest possible depth, these were easily resolved.

I thought for a while on how intricate my unit tests had to be in order to fully test the functionality of the program; I feared that checking the most basic level of evaluation would be inadequate for more nested functions. However, this proved not to be the case; the simple checks served to validate the human tester's knowledge. Token nested functions were enough to test the function – there was no need for a test function of depth 20!

In addition to doctests, I found it an interesting and informative test to visually compare the generated RGB functions with the final image. For the smaller depths, I was able to scan through the x and y pixel values and generally see how the functions were acting geometrically.

While I completed this project in time, I wish I had a scaffolded it better and earlier so that I could have devoted more time to the extensions. I am super interested in developing a music visualizer, and if I don't get around to completing it before this Monday, I will certainly do so later in the semester!