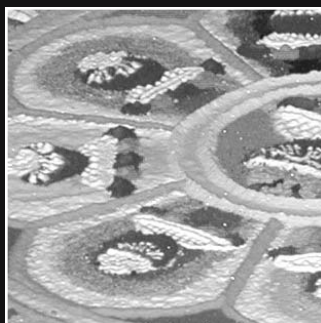


# 1 CODE ART



Ask the average person what they think computer art is, and they'll likely mention the types of imaging effects we associate with Photoshop or maybe a blockbuster 3D animated film like Shrek. I still remember the first time I cloned an eyeball with Photoshop; it was totally thrilling. I also remember getting a copy of Strata Studio Pro and creating my first perfect 3D metal sphere (you know, the one with the highly reflective ship plate texture map). However, once we get a little more experience under our belts and have tried every freakin' filter we can get our hands on, the "gee whiz" factor subsides, and we are stuck with the same problem that all artists and designers experience—the empty white page or canvas. Of course, each year I have many students who believe that they have found the perfect combination of filters that will produce remarkable and original works of art—without the need to exert too much effort (or leave their game consoles for very long). In the end, though, the stylistic footprints left behind by these filters is unavoidable. That is not to imply that the filters are the problem; I couldn't do my job without the genius of Photoshop. It is the approach to using them that is the problem, or the belief that all that power will make the process of creating art any easier.

The fact that these filters are so captivating and that my students are drawn to them is significant, and I don't think it is only because they are a quick fix. I think what we see in those amazing filters, as we do when we stare at a cool seashell or a dramatic sunset, is algorithmic beauty. Now, I can hear some of you beginning to moan when you read a phrase like that, but I promise you I won't lapse into too many pages of new age touchy-feeliness.

For me, algorithmic beauty is just an apparent mathematical pattern that we find engaging. It can be a passage in music, a strange coincidence of events, a crystal, or, yes, even a Photoshop filter. We see a pattern of forces at work, creating something uncommon, yet familiar at the same time. When we can predict the patterning too readily, and in a sense crack the code, the effect tends to wear off, and we have almost the opposite reaction to awe; we feel cheated or at least unimpressed—thus my disdain at spotting too many filters. The really cool and mysterious thing is that in some sense, in detecting beauty, our brains seem to be doing a strange type of intuitive math, where we are measuring intervals, comparing ratios, and computing some kind of algorithmic aesthetic solution.

I experienced an example of this when I was in grad school studying painting. A bunch of us were eating breakfast at the quintessential greasy spoon in center city, Philadelphia. Somebody had found this pretty cheesy visual literacy quiz. The idea was to look at a series of diagrams and pictures and say which one worked the best. There were about ten separate questions on the page, and everyone at the table took the test independently, between forkfuls of grease heaven. Surprisingly, we all got the same exact answers. Now it could have been due to the common grease we were ingesting, or sheer coincidence, but I like to think we all got the same answers because we all shared a common visual algorithmic literacy. The test wasn't about what we liked, but which images worked best. Had the test instead been about which images were better works of art, not only would none of us have agreed, but we most likely would have been thrown out of the restaurant for disorderly conduct. The decision whether an image, object, or design "works" from an aesthetic standpoint may be as close to a quantifiable measure as you can (or probably should) bring to a piece of art.