

# **Graph One**

## **Different Numbers of Threads**

**By Christian Seely, and Jesus Lopez**

**(Note the graph is contained in a image file inside this folder instead of inside this document, the purpose of the document is to talk about the graph and provide some image progression photos to understand the meaning behind the fitness numbers)**

### **Information about testing machine:**

500MB VRAM, intel i5 4590, four cores, Nivida gtx 750.

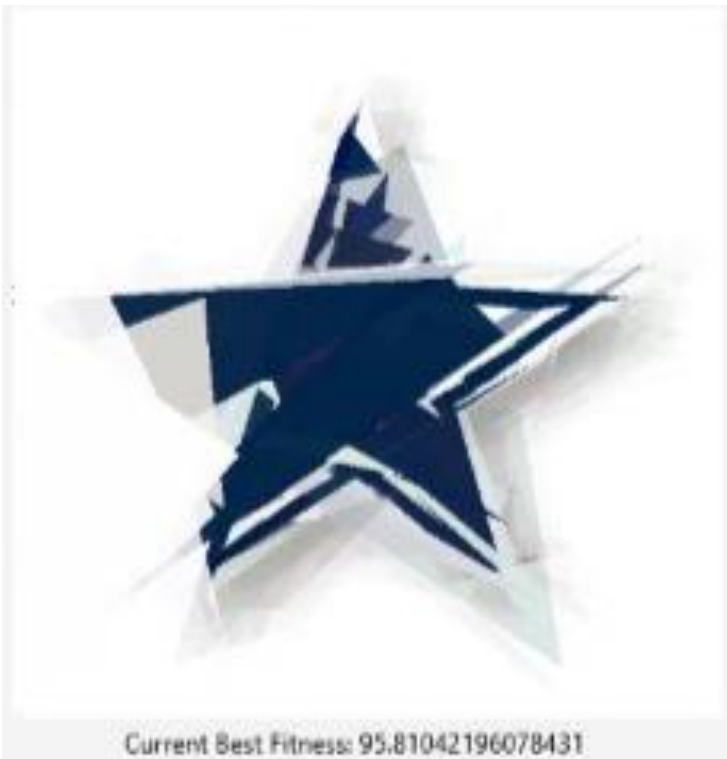
### **Notes about the graph:**

As you can see there are no error bars on the graph, the reason for this is we could not figure out how to make excel or desmos support having error bars for multiple line plots on a single graph, it seemed to support single line plots though. In the end there probably was a way to do it but we could not figure it out in time. Also the lines in the graph all look very similar, the reason for that is probably because the test time was only an hour and a half so the separation between the threads performance on our machine is not as noticeable. I have a feeling that overtime there would be more separation between the threads. Also we had different initial fitnesses which most likely lead to some skew of the data. The reason we did not run longer tests was because we focused on getting the number of tests more so than the time each one was running.

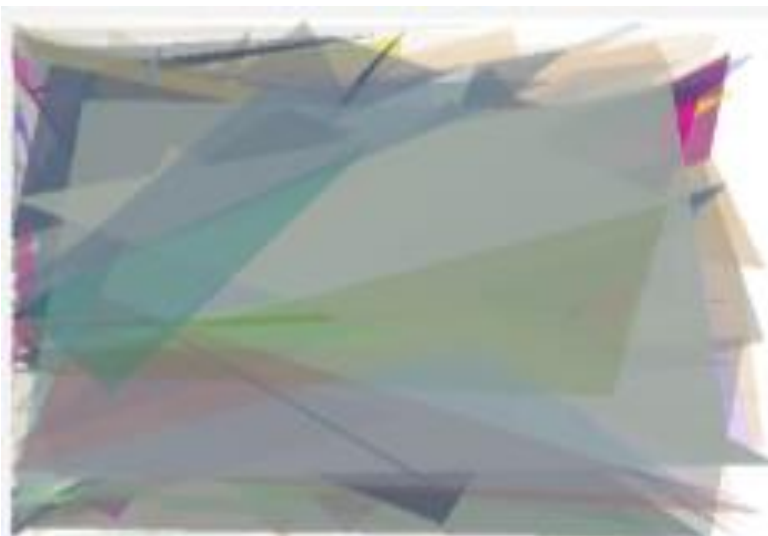
### **Examples of progression photos for each of the five photos:**

#### **Dallas Cowboys Star:**





**The Wave:**



Current Best Fitness: 77.92856037653156



Current Best Fitness: 87.24768078660036

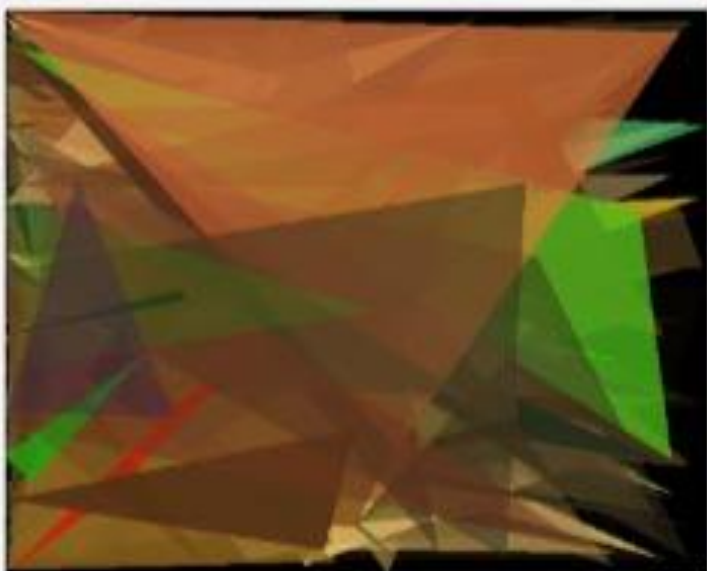


Current Best Fitness: 90.75316297947751  
Most Fit Genome's change in fitness/second:



Current Best Fitness: 91.78647154099735

**Mona Lisa:**



Current Best Fitness: 81.14082291311892



Current Best Fitness: 91.50047000437893



Current Best Fitness: 93.05111727403947



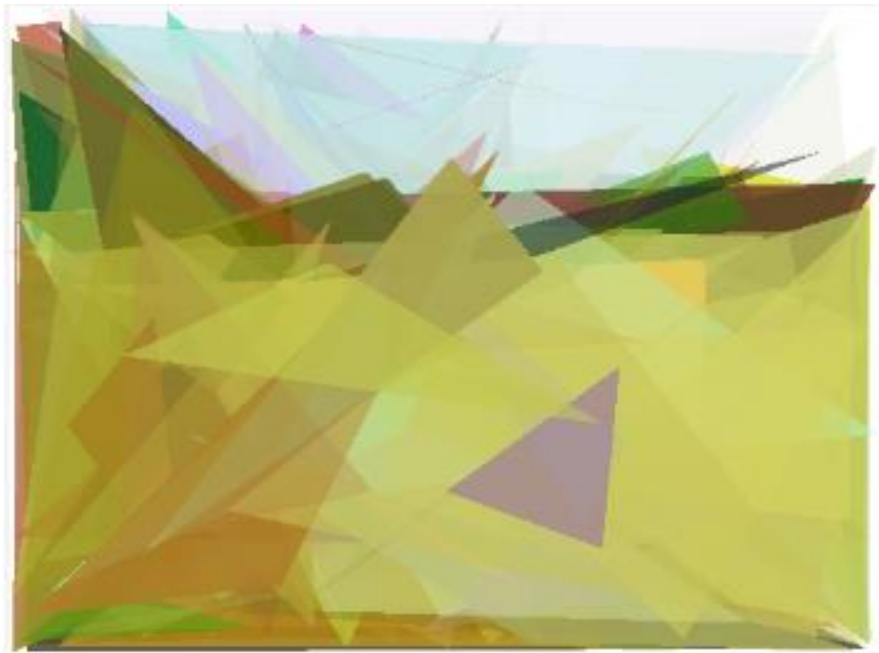
Current Best Fitness: 95.21841937105694



**Poppy Field:**



(78.12 Fitness)

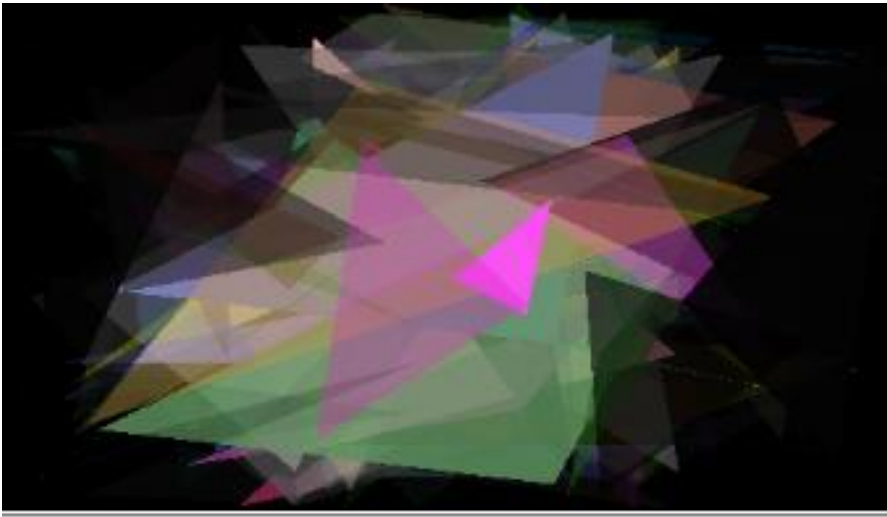


(88.87 Fitness)



(93.22 Fitness)

**Baby:**



(90.24 Fitness)



(93.1 Fitness)



(95.21 Fitness)