

Assignment 6 Extra Credit

James Lawton
*Physics Department, Virginia Tech,
Blacksburg, Virginia 24061, USA*

Abstract: Using a Genetic Algorithm to find the Platonic solids

I. GENETIC ALGORITHM

Here a genetic algorithm is used to find the Platonic solids

There are four basic steps to a genetic algorithm:

1. Creating a gene pool
2. Encoding a configuration
3. Selection operation
4. Crossover operation
5. Mutation operation

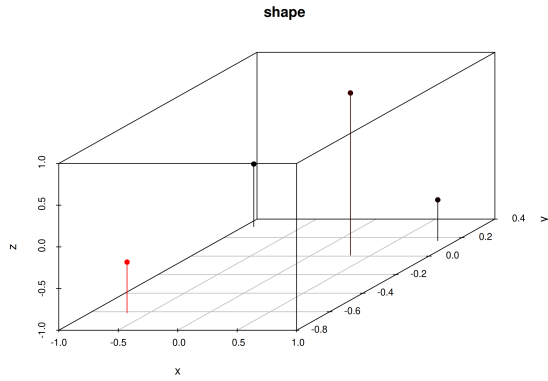


FIG. 1. Condition (a) Initial

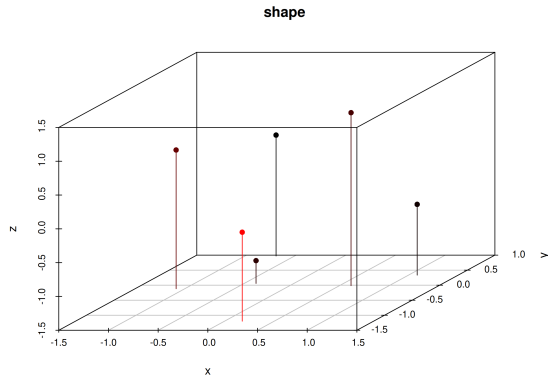


FIG. 2. Condition (b) Initial

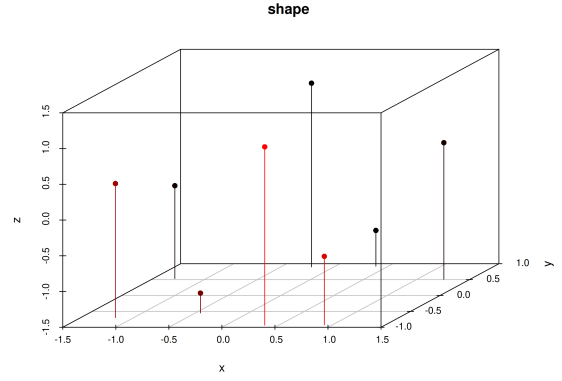


FIG. 3. Condition (a) Results

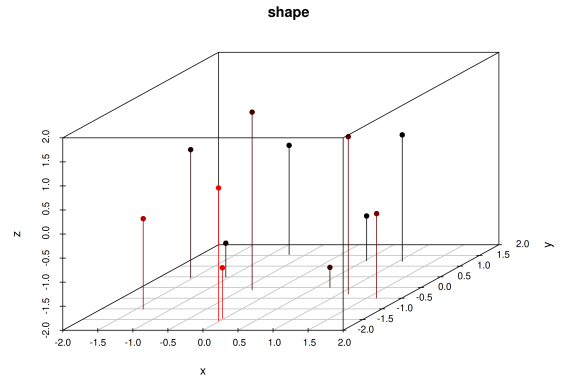


FIG. 4. Condition (b) Results

II. PROBLEM 2

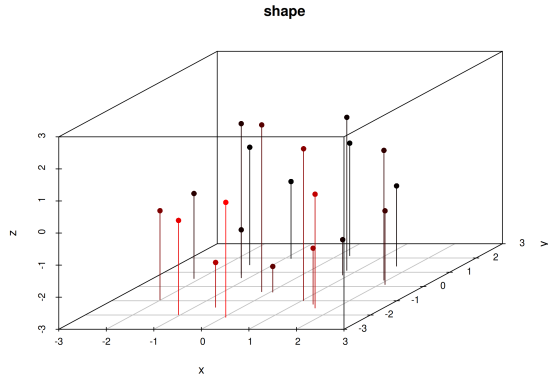


FIG. 5. Condition (b) Results

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- [1] T. Pang, *Introduction to Computational Physics*, Cambridge University Press (2006).