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CSC 410

Assignment 3

Purpose:

To explore and explain key elements related to genetic algorithms.

My Summary of the Questions

Genetic algorithms are heuristic programs that try to obtain the best possible solutions to a specific problem. The author states that genetic algorithms are commonly used as a form of optimization. These algorithms use forms of natural selection and evolution to both extend the population then reduce it. Next the book goes over the idea of Schema theory. Schema’s are basically a part of the original dataset. Gray encoding is based off a schema theory. The idea is to be able to make a schema or substring that will only change the binary number by +-1. Schema’s are important because they allow us to find key related traits that we want to keep. Therefore, whenever you use crossover which will increase your data population you can use a schema to ensure that you are only keeping the data points with the desired key elements.