ABSTRACT

Janice (08220080024)

GENETIC ALGORITHM FOR SOLVING PERSONAL TIME MANAGEMENT APPLICATION BASED ON MOBILE APPLICATION

Regardless of what we do, where we do it, or how well we do it, every people has exactly the same amount of time each day. Many people faces the same problems that they will never have a grasp on true time management unless they are willing to look at their personal habits and decision-making process. In order to find solution to this problem, research is conducted and software is developed through this final project.

In this final project, the time management problems are solved using the software that is built based on genetic algorithm. A gene in a chromosome represents one activity that user input, while a chromosome represent as a one day schedule of the user. For the genetic algorithm, the mechanism is started with initializing populations, that is generated randomly. Then, the fitness value is computed. After that, selection, crossover and mutation are done using truncation selection, single point crossover and displacement mutation. The process of algorithm will stop until one solution is found. This software is build based on android mobile application.

After testing is performed, it might help people in decision-making process about their time management. The best parameter for this problem are 60 population size, 20% for selection, 40% for recombination, 10% for mutation and 30 generation. Using those parameters, the best fitness that can be reached is 1.