

Fall 2020 COSC 3P71: Assignment 2 Mark Break Down

Coding and Implementation:

Interface and Ease of Use

Parameters can be changed easily, the problem optimized in a run can be changed easily. /2

The system can be easily run and executes without error. /3

The system produces correct output. Per each generation: best fitness value, average population fitness value. Per each run: All GA parameters, including random number seed, best solution fitness and its corresponding best solution chromosome /2

GA Implementation

The main GA loop is correctly implemented. The correct steps are taken at each iteration. /3

Order crossover is correctly implemented. /3

Additional crossover correctly implemented. /3

Tournament selection correctly implemented. /3

Mutation operator correctly implemented. /3

Elitism used. /1

Organization and Discretionary

Good coding style. The system is broken down into multiple components. Classes and methods do not contain overly large amounts of code. /3

Comments and Discretionary. /2

/28

Report:

Introduction

The student briefly introduces the topics of the paper. /2

The student provides some justification as to why those topics are worth reading about. /1

Background

The student should provide background information regarding GA and its implementation. /2

Pseudo code is included. /1

Experimental Setup

This section should outline the experiments the student performed. Any configuration details such as parameters, crossover types, mutation operator, etc, should be listed. /3

Results

This section should provide a summary of the student's findings. /2

This should include graphs and tables. Any presented figures should be discussed in the text. /2

The student includes results of statistical tests. /1

Conclusions

This section should include the student's interpretation of the results. /2

The student should reference evidence for any conclusions or generalizations they make. /1

References.

The student has provided sources, and refers to them in the text. /1

Report provided in IEEE Format. /2

Discretionary Marks. /2

/22

Total

/50

BONUS 2% of final grade A new or innovative idea was included in the implementation. The student provided a new crossover, mutation operator, a new fitness function, etc. This is left to the TA's discretion, the idea must differ from methods or techniques discussed in class. /2