

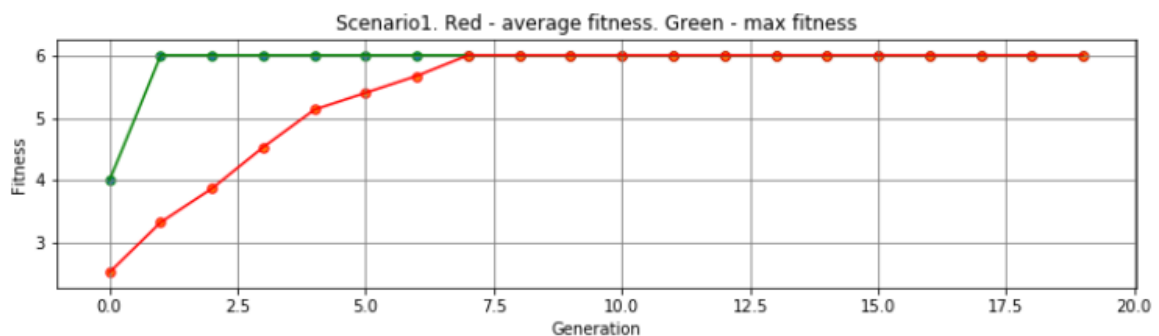
Skarubo Artem AI-13

Sorting

Parameters:

Population size	30
Chromosome size	24
Crossover	One point

First scenario:



First population:

['010111000101001001111011', '010110100011111101000110',
...'110000111100111011010001', '11111100111100101001110']

[['c', 'a', 'b', 'd'], ['a', 'd', 'b', 'c'], ... ['d', 'b', 'c', 'a'], ['c', 'd', 'b', 'a']]

Best chromosome and fitness:

'010111000101001001111011' ['c', 'a', 'b', 'd'], 4

Average fitness:

2.533333333333333

Second population:

['111011000011101001001010', '010111000101001001111011',
...'110000010001110011101010', '100100010011000101101011']

[['a', 'b', 'c', 'd'], ['c', 'a', 'b', 'd'] ... ['d', 'a', 'c', 'b'], ['d', 'b', 'a', 'c']]

Best chromosome and fitness:

'111011000011101001001010' ['a', 'b', 'c', 'd'] 6

Average fitness:

3.3333333333333335

Eighth population:

['111011000011101001001010', '001011011001001011000110',
...'001011011001001011000110', '001011011001001011000110']

['a', 'b', 'c', 'd'], ['a', 'b', 'c', 'd'], ... , ['a', 'b', 'c', 'd'], ['a', 'b', 'c', 'd']]

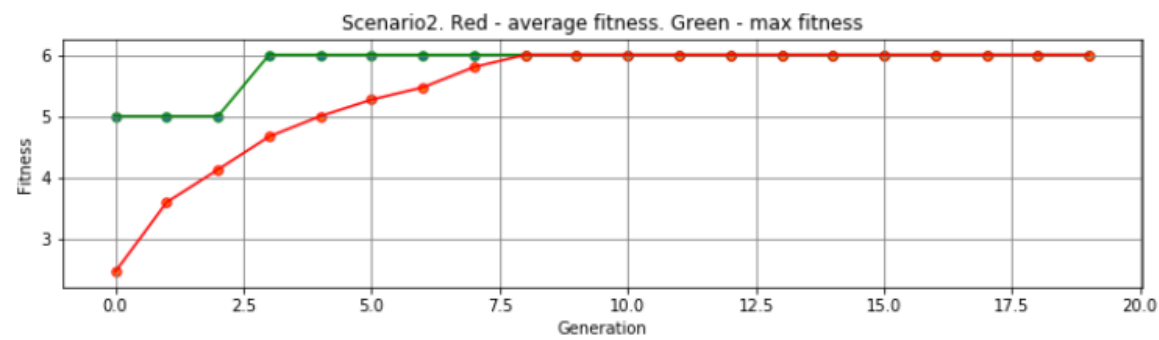
Best chromosome and fitness:

'111011000011101001001010' ['a', 'b', 'c', 'd'] 6

Average fitness:

6.0

Second scenario:



First population:

['100011101010 - 011101111011', '101110010111 - 010110011000',

...

'000010110100 - 011011001111', '100001111000 - 101110111101']

[['b', 'a', 'c', 'd'], ['b', 'a', 'd', 'c'], ... ['c', 'd', 'b', 'a'], ['d', 'c', 'b', 'a']]

Best chromosome and fitness:

Mama	Papa
10 -1010001011	01110111 -1100
11- 0011101010	11010001- 1011
100011101010	011101111011

'100011101010 - 011101111011' ['b', 'a', 'c', 'd'] 5

Average fitness:

2.466666666666667

Fourth population:

['110010010111 - 010110000010', '100011101010 - 011101111011',

...

'001110010111 - 010110011000', '110110000000 - 111010100010']

[['a', 'b', 'c', 'd'], ['b', 'a', 'c', 'd'], ..., ['b', 'a', 'd', 'c'], ['b', 'c', 'a', 'd']]

Best chromosome and fitness:

Mama	Papa
1100 -01011101 1000- 10010111	010110 -011000 011101- 000010
110010010111	010110000010

'110010010111 - 010110000010' ['a', 'b', 'c', 'd'] 6

Average fitness:

4.666666666666667

Ninth population:

['110010010111 - 010110000010', '110010010111 - 010110000010',

...

'110010010111 - 010110000010', '110010010111 - 010110000010']

[['a', 'b', 'c', 'd'], ['a', 'b', 'c', 'd'], ... ['a', 'b', 'c', 'd'], ['a', 'b', 'c', 'd']]

Best chromosome and fitness:

Mama	Papa
110010 -010111 110010- 010111	01011000 -0010 01011000- 0010
110010010111	010110000010

'110010010111 - 010110000010' ['a', 'b', 'c', 'd'] 6

Average fitness:

6.0