

Artificial Intelligent Report

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1. Chromosome Decoding

For chromosome decoding, I used Real Encoding using 3 gens, with total chromosome are 6

2. Population Size

In this program I use 100 population size and 50 generations

3. Parent Selection Scheme

For parent selection, I used Tournament Selection. With two chosen parents.

4. Genetic operation techniques and options (Crossover and Mutation)

For Crossover I used randomly select a point, and for mutation I used scramble mutation

5. Probability value in each Genetic operation

In this program, I use 50% chance for Crossover and 1% chance of mutation.

6. New Generation Selection techniques

For creating new generation, I used Steady-State Fitness-based selection

7. Stopping Criteria

When the generation reach 50 generation, it will stop.

1st try :

```
best chromosome : [0.9531336243703257, 0.5744772338281314, 0.4024300495880945, 0.2645374104224555, 0.6904348310385953, 0.048872456798493835]
best Fitness   : -1.1319181985454125
x1            : -0.12323983006553973
x2            : 0.8364149413683624
>>>
```

2nd try :

```
best chromosome : [0.677949696957197, 0.021178400217541915, 0.16997901143601968, 0.613797481159396, 0.48691448968951334, 0.5875740543898633]
best Fitness   : 0.27373928679515375
x1            : 1.9714527712352004
x2            : 0.5956481745480979
```

3rd try :

```
best chromosome : [0.6303782978160537, 0.05816801931153259, 0.9659972792842131, 0.5136603705563121, 0.9207655791749176, 0.794709222372965]
best Fitness   : 0.243770865639234
x1            : -2.0077841571971184
x2            : -0.3899649908983842
```