YOUR EA REPORT TITLE

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December 3, 2023

1 Introduction

Introduction text here.

2 Algorithms

Outline of your algorithms, algorithm parameters, and settings used for those parameters.

Algorithm 1: A framework of Genetic Algorithm
Please describe your genetic algorithm using this template

Input : Population size μ
Crossover probability p_c
etc.
Termination : The algorithm terminates when..

```
Initialization;
for i = 1 to B do
    Selection;
    Crossover;
    Mutation;
end
```

You can explain the implementation in various ways, as long as you make the clear and understandable. If you prefer to explain your algorithm in pseudo code, you could find an example (Algorithm 1). Please make sure that the algorithm and the results are reproducible from your description. **Note that if we cannot get the same results using the codes you submit, the PA grade is 0.** You can fix the random seed during your experiment and provide it to us so that we can avoid the different results caused by randomization.

3 Experimental Results

Description of the experiments and the results. Use the tables and figures generated from IOHanalyzer. Make sure to present your results in a way that is convenient to the reader, **do not blindly include plots of all your experiments, try to combine information in figures and tables!**

Figure 1 and 2 show examples of how to insert your figure in the report. Please also see the captions, make sure you explain your figures properly in the captions.

Table 1 and Table 2 show two examples of how to insert your tables in the report. **Note that the *tex* files of tables can also be downloaded from IOHanalyzer.**

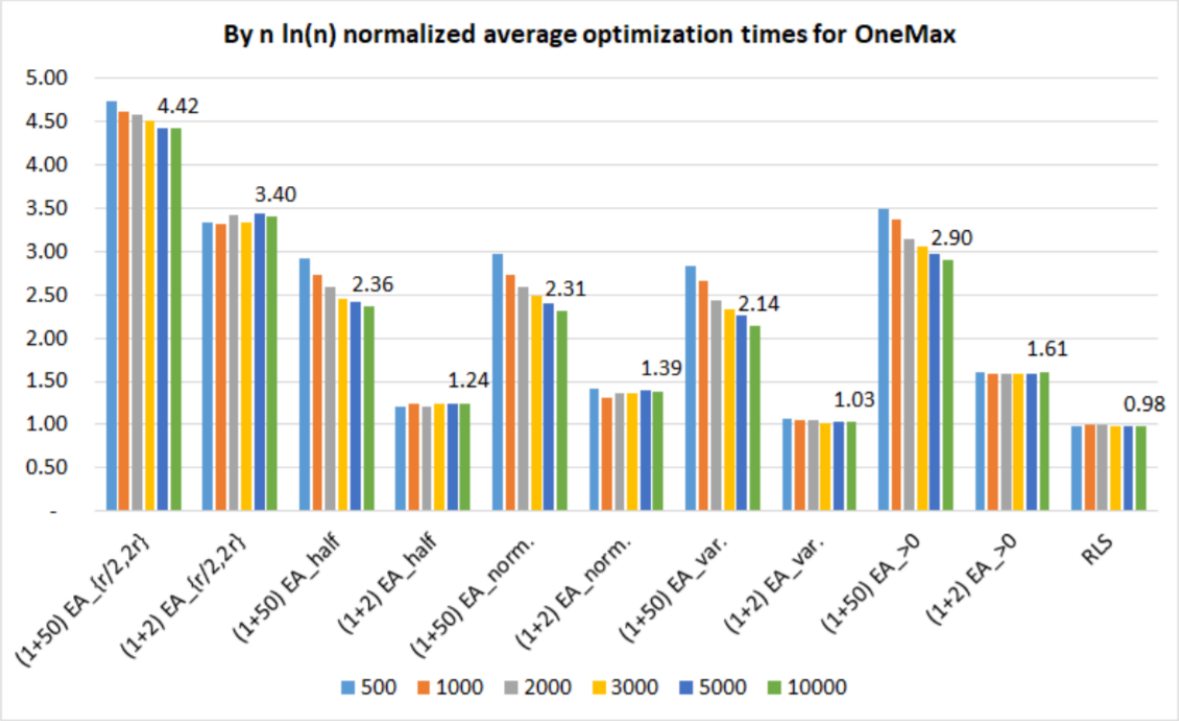

Figure 1: By $n \ln(n)$ normalized average optimization times for OneMax, for n between 500 and 10 000. Displayed numbers are for $n = 10000$ [1].

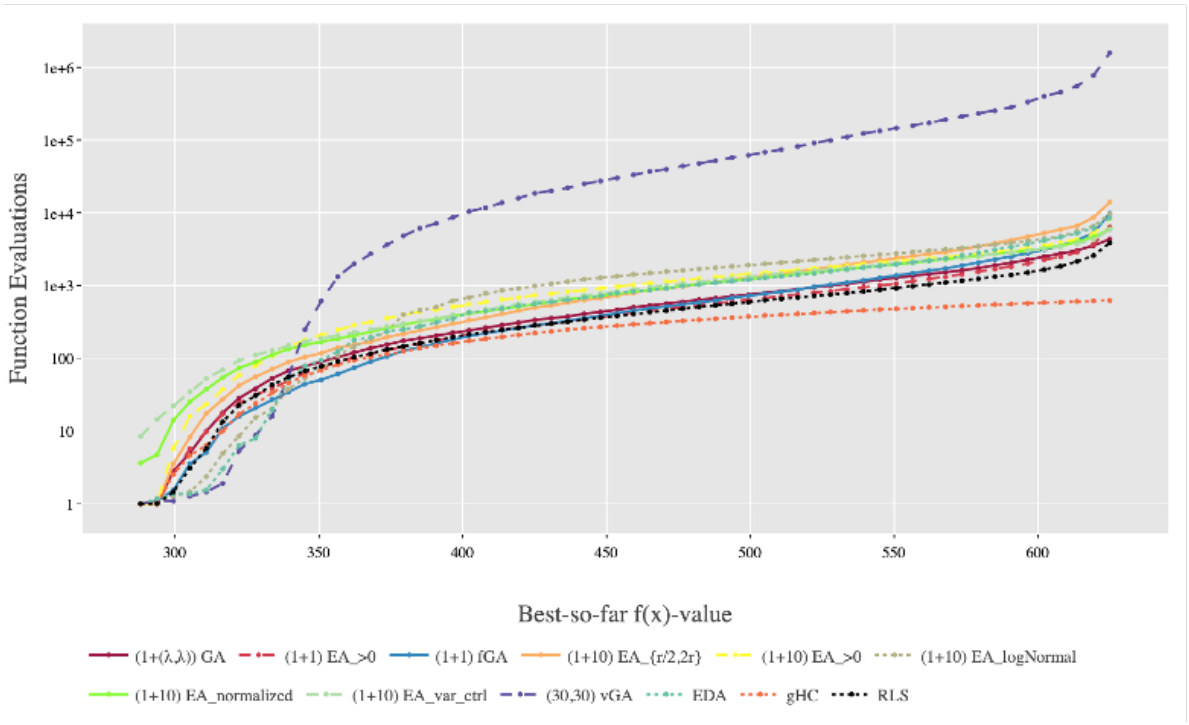

Figure 2: The fixed-target results of 11 algorithms. The figure is downloaded from IOHanalyzer.

Table 1: Sample table 1 title

	Part	
Name	Description	Size (μm)
Dendrite	Input terminal	$\sim$100
Axon	Output terminal	$\sim$10
Soma	Cell body	up to 10^6

Table 2: Sample table 2 title

m	$\Re\{\underline{\mathfrak{X}}(m)\}$	$-\Im\{\underline{\mathfrak{X}}(m)\}$	$\mathfrak{X}(m)$	$\frac{\mathfrak{X}(m)}{23}$	A_m	$\varphi(m)$ / °	φ_m / °
1	16.128	8.872	16.128	1.402	1.373	-146.6	-137.6
2	3.442	-2.509	3.442	0.299	0.343	133.2	152.4
3	1.826	-0.363	1.826	0.159	0.119	168.5	-161.1
4	0.993	-0.429	0.993	0.086	0.08	25.6	90
5	1.29	0.099	1.29	0.112	0.097	-175.6	-114.7
6	0.483	-0.183	0.483	0.042	0.063	22.3	122.5
7	0.766	-0.475	0.766	0.067	0.039	141.6	-122
8	0.624	0.365	0.624	0.054	0.04	-35.7	90
9	0.641	-0.466	0.641	0.056	0.045	133.3	-106.3
10	0.45	0.421	0.45	0.039	0.034	-69.4	110.9
11	0.598	-0.597	0.598	0.052	0.025	92.3	-109.3

4 Discussion and Conclusion

Summarize the results and conclude your report. If you would like to put main conclusions discussions as lists in this part, you can see an example below.

1) We suggest using population size $\mu = x$ for the genetic algorithm solving the problem.
2) The genetic algorithm benefits from small mutation rates as solving the NAS problem. (Just an example, this may not be not the truth.)
3) We observe that the evolution strategy benefits from comma selection for solving the NAS problem. (Again, just an example).

Tips: Please put the references in the file *references.bib* and cite them in the right line, like this [2].

References

[1] Furong Ye, Carola Doerr, and Thomas Bäck. Interpolating local and global search by controlling the variance of standard bit mutation. In *2019 IEEE Congress on Evolutionary Computation (CEC)*, pages 2292–2299. IEEE, 2019.

[2] Guy Hadash, Einat Kermany, Boaz Carmeli, Ofer Lavi, George Kour, and Alon Jacovi. Estimate and replace: A novel approach to integrating deep neural networks with existing applications. *arXiv preprint arXiv:1804.09028*, 2018.