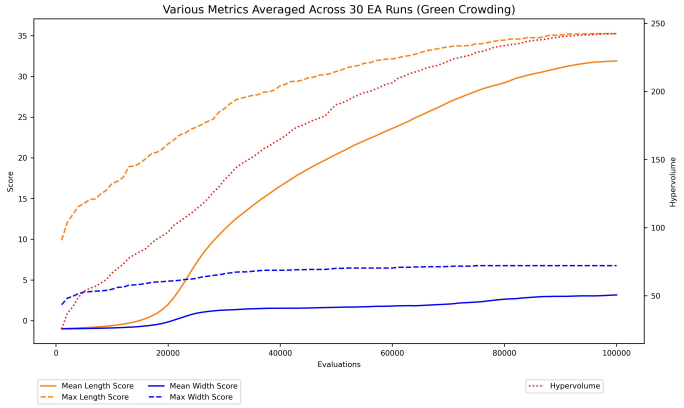
Crowding

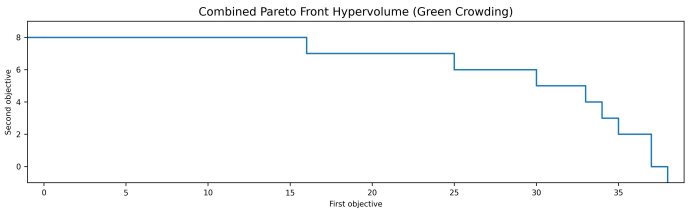
Run	MU	Num Children	Mutation Rate	Parent Selection	Survival Selection	Parent Selection Kwargs	Survival Selection Kwargs
1	500	500	0.001	k_tournament_with_replacement	k_tournament_without_replacement	1	1
2	1000	1000	0.001	k_tournament_with_replacement	k_tournament_without_replacement	1	500
3	1000	1000	0.001	k_tournament_with_replacement	truncation	1	500
4	1000	1000	0.001	k_tournament_with_replacement	k_tournament_without_replacement	1	500

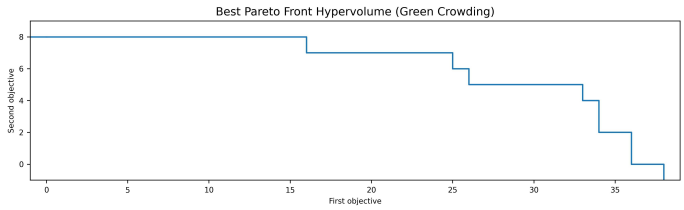
No Crowding

Run	MU	Num Children	Mutation Rate	Parent Selection	Survival Selection	Parent Kwargs	Survival Kwargs
1	1000	1000	0.001	k_tournament_with_replacement	k_tournament_without_replacement	1	800
2	1000	1000	0.001	k_tournament_with_replacement	k_tournament_without_replacement	1	1000
3	1000	1000	0.001	k_tournament_with_replacement	k_tournament_without_replacement	1	1000
4	1000	1000	0.001	k_tournament_with_replacement	truncation	1	1000

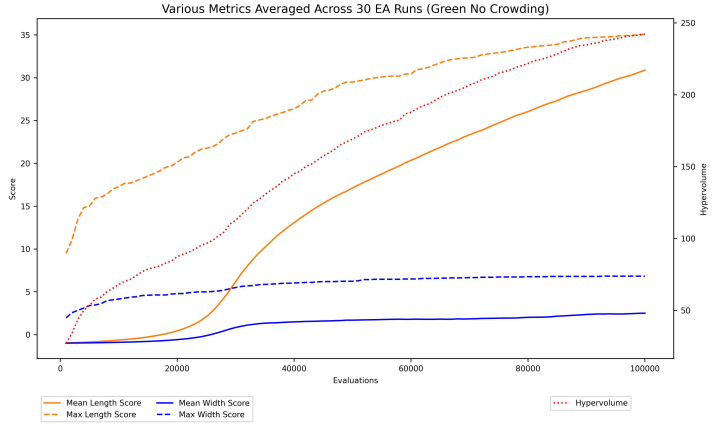
Crowding

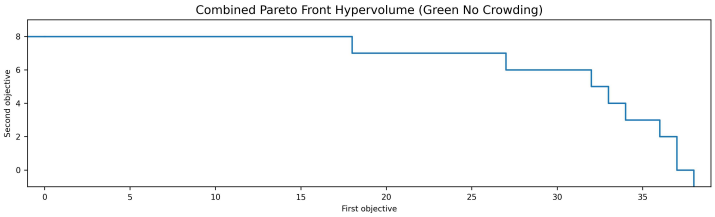


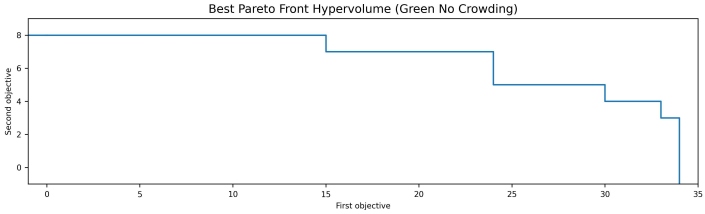




No Crowding








```
Number of samples: 30
data/1d/green_crowding/hypervolume_per_run.txt mean: 242.53333333333333
data/1d/green_crowding/hypervolume_per_run.txt stdv: 16.353283616982594
data/1d/green_no_crowding/hypervolume_per_run.txt mean: 242.23333333333332
data/1d/green_no_crowding/hypervolume_per_run.txt stdv: 16.904770461849402
p-value: 0.9445441664366124
```

The mean hypervolume per run is pretty similar (around 242.5). The standard deviations are also close, indicating a similar spread of values in each condition. With a p-value of 0.9445, there's no significant difference between the two conditions, suggesting crowding doesn't notably impact hypervolume in my implementation.