

Iterations Diagrams

ITERATION - 1

Population 1	424410731339.26685	Parent 1-1	Crossover child 1	Final child 1
Population 2	425173264115.19244	Parent 2-1	Crossover child 2	Final child 2
Population 3	425226929066.0966	Parent 1-2	Crossover child 3	Final child 3
Population 4	425236238266.57776	Parent 2-2	Crossover child 4	Final child 4
Population 5	426885730764.848	Parent 1-3	Crossover child 5	Final child 5
Population 6	78049829496387.47	Parent 2-3	Crossover child 6	Final child 6
Population 7	5.371853645361609e+19	Parent 1-4	Crossover child 7	Final child 7
Population 8	6.049067095052588e+26	Parent 2-4	Crossover child 8	Final child 8
Population 9	3.200639922418288e+29	Parent 1-5	Crossover child 9	Final child 9
Population 10	1.042400360804611e+30	Parent 2-5	Crossover child 10	Final child 10
Current population	Fitness values	mating pool	After crossover	After mutation

Population array

```
[[0.016307981472373258, 0.0030021156345732374, -2.5847086771511874e-06, 0.07950860832601615,
-0.7830747228947925, 0.0, -2.7328760801102547e-05, 0.0, 0.0, 0.0, 0.0],
[0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136,
-0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0],
[0.013016246631645651, 0.0003050530310712928, 3.866310323809442e-06, 0.07432870953298341,
-0.7837755011980708, 0.0, -3.209253274750442e-05, 0.0, 0.0, 0.0, 0.0],
[0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671,
-0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0],
[-0.0036713924954224417, -0.0012687010003726482, -1.3852884982307894e-05, -0.005283672574726471,
-0.7820353104775084, 0.0, 3.855169074992219e-05, 0.0, 0.0, 0.0, 0.0],
[0.0650194903436972, -0.00022446756218410624, -2.648910153322379e-05, 0.07169670874151451,
2.095878087448188, 0.0, -3.250616059232478e-05, 0.0, 0.0, 0.0, 0.0],
[0.013214793118925013, -0.003175908058327376, -3.136350224522896e-05, 0.21084111316417534,
-0.7826725628922708, 0.0, -1.2808620886055714e-05, -0.022554627911381867, 0.0, 0.0, 0.0],
[0.013280125002732578, 0.0020682217389482336, 6.016374212592684e-05, -0.15831130540526606,
-0.7829407168535817, 0.0, -1.7765807623358557e-05, -0.003689016691627786, 0.0, -0.03278839675658346, 0.0],
[0.0042799307067875525, 0.0031572425330456066, -1.6306360289268145e-06, 0.3448279778132091,
-0.4562487401936402, 0.0, -2.7776731061548646e-05, 0.0, 0.0, -0.01711383448282039, -0.015264250979170092],
[0.013631214020707997, 0.0015607907711677142, -4.854302032943829e-05, 0.08270828028670693,
-0.7840770731205366, 0.0, -3.8948490478818415e-05, 0.0, -0.04918964831511263, 0.016782020387196714,
0.02785819576287317]]
```

Mating pool - 1/5

parent 1 : [0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0]
parent 2 : [0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0]

child 1 : [0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0]
child 2 : [0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0]

Child1 before mutation

[0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671, 1.9563209751757762, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0]

child2 before mutation

[0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.013287438227046927, -0.0006967967107447701, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0, -4.353215724537754e-05, 0.0, 0.0, 0.0417993889491665, 0.0]

Mating pool - 2/ 15

parent 1 : [0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0]
parent 2 : [-0.0036713924954224417, -0.0012687010003726482, -1.3852884982307894e-05, -0.005283672574726471, -0.7820353104775084, 0.0, 3.855169074992219e-05, 0.0, 0.0, 0.0, 0.0]

child 1 : [0.015382214772259147, -0.0003454125020911407, -2.502555287110284e-05, 0.06278070657971405, -0.7830265605547132, 0.0, -2.4276116192080872e-05, 0.0, 0.0, 0.0, 0.0]
child 2 : [-0.005766169040634661, -0.0013702084505626641, -1.2624548410020542e-05, -0.012766752445853803, -0.7819263312494286, 0.0, 4.5459055561228266e-05, 0.0, 0.0, 0.0, 0.0]

child1 before mutation

[0.015382214772259147, -0.0003454125020911407, -2.502555287110284e-05, 0.06278070657971405, -0.7830265605547132, 0.0, -2.4276116192080872e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.015382214772259147, -0.0015889001057584613, -5.172998701513215e-06, 0.06278070657971405, 3.372931972582719, 0.0, 0.00012134453938874645, 0.0, 0.0, 0.0, 0.0]

child2 before mutation

[-0.005766169040634661, -0.0013702084505626641, -1.2624548410020542e-05, -0.012766752445853803, -0.7819263312494286, 0.0, 4.5459055561228266e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[-0.005766169040634661, 0.0028314310556260738, -1.2624548410020542e-05, -0.012766752445853803, -0.7819263312494286, -0.0422198003384357, 4.5459055561228266e-05, 0.0, 0.0, 0.0, 0.0]

Mating pool - 3/5

parent 1 : [0.016307981472373258, 0.0030021156345732374, -2.5847086771511874e-06, 0.07950860832601615, -0.7830747228947925, 0.0, -2.7328760801102547e-05, 0.0, 0.0, 0.0, 0.0]

parent 2 : [0.013016246631645651, 0.0003050530310712928, 3.866310323809442e-06, 0.07432870953298341, -0.7837755011980708, 0.0, -3.209253274750442e-05, 0.0, 0.0, 0.0, 0.0]

child 1 : [0.016620016652321587, 0.0032577797313294685, -3.196223568906534e-06, 0.07999962924058071, -0.7830082936425752, 0.0, -2.687718602109999e-05, 0.0, 0.0, 0.0, 0.0]

child 2 : [0.012704211451697318, 4.938893431506117e-05, 4.477825215564788e-06, 0.07383768861841884, -0.7838419304502882, 0.0, -3.254410752750697e-05, 0.0, 0.0, 0.0, 0.0]

child1 before mutation

[0.016620016652321587, 0.0032577797313294685, -3.196223568906534e-06, 0.07999962924058071, -0.7830082936425752, 0.0, -2.687718602109999e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.016620016652321587, 0.0032577797313294685, -7.529579605517151e-06, 0.07999962924058071, 0.17741275806536627, -0.02684957619658166, -2.687718602109999e-05, 0.0, 0.01043225098040211, -0.041301232420556104, 0.0]

child2 before mutation

[0.012704211451697318, 4.938893431506117e-05, 4.477825215564788e-06, 0.07383768861841884, -0.7838419304502882, 0.0, -3.254410752750697e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.012704211451697318, 9.683630199946055e-05, -1.4492093581646179e-05, -0.22576310161703086, -0.7838419304502882, 0.0, 1.8687175429183542e-05, 0.0, 0.0, 0.0, 0.0]

Mating pool - 4/5

parent 1 : [0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0]

parent 2 : [-0.0036713924954224417, -0.0012687010003726482, -1.3852884982307894e-05, -0.005283672574726471, -0.7820353104775084, 0.0, 3.855169074992219e-05, 0.0, 0.0, 0.0, 0.0]

child 1 : [0.011139261667886213, -0.0005510150289501934, -2.2537566988067558e-05, 0.047623788271630864, -0.7828058240016187, 0.0, -1.0285304123771055e-05, 0.0, 0.0, 0.0, 0.0]

child 2 : [-0.0015232159362617275, -0.0011646059237036114, -1.5112534293055828e-05, 0.002390165862229377, -0.7821470678025231, 0.0, 3.1468243492918446e-05, 0.0, 0.0, 0.0, 0.0]

child1 before mutation

[0.011139261667886213, -0.0005510150289501934, -2.2537566988067558e-05, 0.047623788271630864, -0.7828058240016187, 0.0, -1.0285304123771055e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.011139261667886213, -0.0005510150289501934, -2.2537566988067558e-05, 0.047623788271630864, -0.7828058240016187, -0.008279741608441749, 3.2785349164340946e-05, -0.03238211915693227, -0.005074811929336599, 0.0, 0.0]

child2 before mutation

[-0.0015232159362617275, -0.0011646059237036114, -1.5112534293055828e-05, 0.002390165862229377, -0.7821470678025231, 0.0, 3.1468243492918446e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[-0.0015232159362617275, -0.0011646059237036114, -1.5112534293055828e-05, 0.002390165862229377, -0.7821470678025231, 0.0, 3.1468243492918446e-05, -0.028491765005418945, 0.0, 0.0, 0.0]

Mating pool - 5/5

parent 1 : [0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0]

parent 2 : [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0]

child 1 : [0.013324525141392084, -0.00023032589009476667, -1.9934462067179247e-05, 0.05825471845309378, -0.7830426685888472, 0.0, -1.969679759658551e-05, 0.0, 0.0, 0.0, 0.0]

child 2 : [0.013521481998240924, 0.0009199365799326029, 5.794023423030554e-07, 0.0739588962121643, -0.7837069674239605, 0.0, -3.2060313768288615e-05, 0.0, 0.0, 0.0, 0.0]

child1 before mutation

[0.013324525141392084, -0.00023032589009476667, -1.9934462067179247e-05, 0.05825471845309378, -0.7830426685888472, 0.0, -1.969679759658551e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[-0.007866896029810678, -0.00023032589009476667, -1.7275972178058345e-05, 0.05825471845309378, -0.7830426685888472, 0.0, -6.898189266065542e-05, 0.01630816667436849, 0.0, 0.009039641653523854, 0.0]

child2 before mutation

[0.013521481998240924, 0.0009199365799326029, 5.794023423030554e-07, 0.0739588962121643,
-0.7837069674239605, 0.0, -3.2060313768288615e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.010426839017541656, 0.0009199365799326029, 1.2820259811497021e-06, -0.3244499994819434,
-1.0223886630701884, -0.013403509565960835, -3.2060313768288615e-05, 0.0, 0.0005555603219287719, 0.0, 0.0]

CHILD ARRAY

[[0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671,
1.9563209751757762, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0], [0.013287438227046927,
-0.0006967967107447701, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0,
-4.353215724537754e-05, 0.0, 0.0, 0.0417993889491665, 0.0], [0.015382214772259147, -0.0015889001057584613,
-5.172998701513215e-06, 0.06278070657971405, 3.372931972582719, 0.0, 0.00012134453938874645, 0.0, 0.0, 0.0, 0.0],
[-0.005766169040634661, 0.0028314310556260738, -1.2624548410020542e-05, -0.012766752445853803,
-0.7819263312494286, -0.0422198003384357, 4.5459055561228266e-05, 0.0, 0.0, 0.0, 0.0], [0.016620016652321587,
0.0032577797313294685, -7.529579605517151e-06, 0.07999962924058071, 0.17741275806536627,
-0.02684957619658166, -2.687718602109999e-05, 0.0, 0.01043225098040211, -0.041301232420556104, 0.0],
[0.012704211451697318, 9.683630199946055e-05, -1.4492093581646179e-05, -0.22576310161703086,
-0.7838419304502882, 0.0, 1.8687175429183542e-05, 0.0, 0.0, 0.0, 0.0], [0.011139261667886213,
-0.0005510150289501934, -2.2537566988067558e-05, 0.047623788271630864, -0.7828058240016187,
-0.008279741608441749, 3.2785349164340946e-05, -0.03238211915693227, -0.005074811929336599, 0.0, 0.0],
[-0.0015232159362617275, -0.0011646059237036114, -1.5112534293055828e-05, 0.002390165862229377,
-0.7821470678025231, 0.0, 3.1468243492918446e-05, -0.028491765005418945, 0.0, 0.0, 0.0], [-0.007866896029810678,
-0.00023032589009476667, -1.7275972178058345e-05, 0.05825471845309378, -0.7830426685888472, 0.0,
-6.898189266065542e-05, 0.01630816667436849, 0.0, 0.009039641653523854, 0.0], [0.010426839017541656,
0.0009199365799326029, 1.2820259811497021e-06, -0.3244499994819434, -1.0223886630701884,
-0.013403509565960835, -3.2060313768288615e-05, 0.0, 0.0005555603219287719, 0.0, 0.0]]

FITNESS ARRAY OF CHILD

[70575527467435.98, 9.829823736592167e+26, 163772730810434.78, 1.3185133021935843e+39,
5.3324654910125695e+38, 437700880922.8893, 5.070908125378674e+37, 8.572057068869042e+19,
4.604515342258371e+25, 1.328890577423777e+38]

ITERATION - 2

Population 1	424410731339.26685	Parent 1-1	Crossover child 1	Final child 1
Population 2	425173264115.19244	Parent 2-1	Crossover child 2	Final child 2
Population 3	425226929066.0966	Parent 1-2	Crossover child 3	Final child 3
Population 4	425236238266.57776	Parent 2-2	Crossover child 4	Final child 4
Population 5	426885730764.848	Parent 1-3	Crossover child 5	Final child 5
Population 6	437700880922.8893	Parent 2-3	Crossover child 6	Final child 6
Population 7	70575527467435.98	Parent 1-4	Crossover child 7	Final child 7
Population 8	163772730810434.78	Parent 2-4	Crossover child 8	Final child 8
Population 9	8.572057068869042e+19	Parent 1-5	Crossover child 9	Final child 9
Population 10	4.604515342258371e+25	Parent 2-5	Crossover child 10	Final child 10

Current population Fitness values mating pool After crossover After mutation

Population array

```
[[0.016307981472373258, 0.0030021156345732374, -2.5847086771511874e-06, 0.07950860832601615,
-0.7830747228947925, 0.0, -2.7328760801102547e-05, 0.0, 0.0, 0.0, 0.0], [0.01355856891258608,
0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0,
-3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0], [0.013016246631645651, 0.0003050530310712928, 3.866310323809442e-
06, 0.07432870953298341, -0.7837755011980708, 0.0, -3.209253274750442e-05, 0.0, 0.0, 0.0, 0.0],
[0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671,
-0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0], [-0.0036713924954224417,
-0.0012687010003726482, -1.3852884982307894e-05, -0.005283672574726471, -0.7820353104775084, 0.0,
3.855169074992219e-05, 0.0, 0.0, 0.0, 0.0], [0.012704211451697318, 9.683630199946055e-05, -1.4492093581646179e-
05, -0.22576310161703086, -0.7838419304502882, 0.0, 1.8687175429183542e-05, 0.0, 0.0, 0.0, 0.0],
[0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671,
1.9563209751757762, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0], [0.015382214772259147, -0.0015889001057584613,
-5.172998701513215e-06, 0.06278070657971405, 3.372931972582719, 0.0, 0.00012134453938874645, 0.0, 0.0, 0.0, 0.0],
[-0.0015232159362617275, -0.0011646059237036114, -1.5112534293055828e-05, 0.002390165862229377,
-0.7821470678025231, 0.0, 3.1468243492918446e-05, -0.028491765005418945, 0.0, 0.0, 0.0], [-0.007866896029810678,
-0.00023032589009476667, -1.7275972178058345e-05, 0.05825471845309378, -0.7830426685888472, 0.0,
-6.898189266065542e-05, 0.01630816667436849, 0.0, 0.009039641653523854, 0.0]]
```

Mating pool - 1/5

parent 1 : [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0]

parent 2 : [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0]

child 1 : [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0]

child 2 : [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0]

Child1 before mutation

[0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.01355856891258608, 0.004204223877899251, 4.4421565739393014e-06, 0.07691598795667136, 3.54103696975991, -0.027046926178861664, -3.438835998409932e-05, -0.02572528580879421, 0.0, 0.0, 0.0]

child2 before mutation

[0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0]

Mating pool - 2/ 5

parent 1 : [0.016307981472373258, 0.0030021156345732374, -2.5847086771511874e-06, 0.07950860832601615, -0.7830747228947925, 0.0, -2.7328760801102547e-05, 0.0, 0.0, 0.0, 0.0]

parent 2 : [0.013016246631645651, 0.0003050530310712928, 3.866310323809442e-06, 0.07432870953298341, -0.7837755011980708, 0.0, -3.209253274750442e-05, 0.0, 0.0, 0.0, 0.0]

child 1 : [0.01534822933865449, 0.0022157486537164443, -7.038222903656323e-07, 0.07799833512370635, -0.783279044781086, 0.0, -2.871770629985305e-05, 0.0, 0.0, 0.0, 0.0]

child 2 : [0.013975998765364418, 0.0010914200119280858, 1.9854239370238867e-06, 0.07583898273529321, -0.7835711793117774, 0.0, -3.070358724875392e-05, 0.0, 0.0, 0.0, 0.0]

child1 before mutation

[0.01534822933865449, 0.0022157486537164443, -7.038222903656323e-07, 0.07799833512370635, -0.783279044781086, 0.0, -2.871770629985305e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.01534822933865449, 0.0022157486537164443, -7.038222903656323e-07, 0.07799833512370635, -0.783279044781086, -0.04976954779864719, -2.871770629985305e-05, 0.0, 0.0, -0.01950218530355953, 0.0]

child2 before mutation

[0.013975998765364418, 0.0010914200119280858, 1.9854239370238867e-06, 0.07583898273529321, -0.7835711793117774, 0.0, -3.070358724875392e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.013975998765364418, -0.001329171196424373, -7.582538947709678e-06, 0.07583898273529321, -0.7835711793117774, 0.023084806586315315, 0.00014615057561240442, 0.02815563282134957, 0.0, 0.0, 0.0]

Mating pool - 3/5

parent 1 : [-0.0036713924954224417, -0.0012687010003726482, -1.3852884982307894e-05, -0.005283672574726471, -0.7820353104775084, 0.0, 3.855169074992219e-05, 0.0, 0.0, 0.0, 0.0]

parent 2 : [0.016307981472373258, 0.0030021156345732374, -2.5847086771511874e-06, 0.07950860832601615,

-0.7830747228947925, 0.0, -2.7328760801102547e-05, 0.0, 0.0, 0.0, 0.0]
child 1 : [-0.007136798572518071, -0.0020094706533536947, -1.580734094817634e-05, -0.019990824360256218,
-0.7818550252436832, 0.0, 4.997860119940478e-05, 0.0, 0.0, 0.0, 0.0]
child 2 : [0.019773387549468887, 0.003742885287554284, -6.302527112827419e-07, 0.09421576011154591,
-0.7832550081286177, 0.0, -3.875567125058515e-05, 0.0, 0.0, 0.0, 0.0]

child1 before mutation

[-0.007136798572518071, -0.0020094706533536947, -1.580734094817634e-05, -0.019990824360256218,
-0.7818550252436832, 0.0, 4.997860119940478e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.03315262681763732, -0.0020094706533536947, -1.580734094817634e-05, -0.019990824360256218,
-0.7818550252436832, -0.02472330255354227, 4.997860119940478e-05, 0.0, 0.0, -0.0169637441952612,
-0.0034706054641006484]

child2 before mutation

[0.019773387549468887, 0.003742885287554284, -6.302527112827419e-07, 0.09421576011154591,
-0.7832550081286177, 0.0, -3.875567125058515e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.019773387549468887, -0.00719943767895455, -6.302527112827419e-07, 0.03473252338212666,
-0.7832550081286177, 0.0, -3.875567125058515e-05, 0.0, 0.0, 0.0, 0.0]

Mating pool - 4/5

parent 1 : [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136,
-0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0]
parent 2 : [0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671,
-0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0]
child 1 : [0.013509869450045484, 0.0008521172687174142, -6.300921781777862e-07, 0.0730329801307714,
-0.7836678004593655, 0.0, -3.1331362617737035e-05, 0.0, 0.0, 0.0, 0.0]
child 2 : [0.01333613768958752, -0.00016250657887957799, -1.87249675466984e-05, 0.059180634534486666,
-0.7830818355534419, 0.0, -2.0425748747137088e-05, 0.0, 0.0, 0.0, 0.0]

child1 before mutation

[0.013509869450045484, 0.0008521172687174142, -6.300921781777862e-07, 0.0730329801307714,
-0.7836678004593655, 0.0, -3.1331362617737035e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.06039504729588431, 0.0008521172687174142, -6.300921781777862e-07, 0.0730329801307714,
-0.7836678004593655, 0.0, -0.0001157357809747028, 0.0, 0.0, -0.0486033021564343, 0.0]

child2 before mutation

[0.01333613768958752, -0.00016250657887957799, -1.87249675466984e-05, 0.059180634534486666,
-0.7830818355534419, 0.0, -2.0425748747137088e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.01333613768958752, -0.00016250657887957799, -1.87249675466984e-05, 0.08324740009882474,
-0.7830818355534419, 0.0, -3.479211964097095e-05, 0.0, 0.0, 0.03754508686406491, 0.015293134548750947]

Mating pool - 5/5

parent 1 : [0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0]
parent 2 : [-0.0036713924954224417, -0.0012687010003726482, -1.3852884982307894e-05, -0.005283672574726471, -0.7820353104775084, 0.0, 3.855169074992219e-05, 0.0, 0.0, 0.0, 0.0]
child 1 : [0.00863953776396382, -0.0006721451801570795, -2.107177709328061e-05, 0.03869413242286231, -0.7826757776813631, 0.0, -2.0426564908298817e-06, 0.0, 0.0, 0.0, 0.0]
child 2 : [0.0009765079676606662, -0.0010434757724967253, -1.657832418784278e-05, 0.011319821710997937, -0.7822771141227784, 0.0, 2.3225595859977274e-05, 0.0, 0.0, 0.0, 0.0]

child1 before mutation

[0.00863953776396382, -0.0006721451801570795, -2.107177709328061e-05, 0.03869413242286231, -0.7826757776813631, 0.0, -2.0426564908298817e-06, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.0012730127606212019, -0.0006721451801570795, 7.421723358711203e-05, -0.026108672357409362, 1.0309965172328206, 0.0, -6.200430215553004e-07, 0.0, 0.0, 0.0, 0.0]

child2 before mutation

[0.0009765079676606662, -0.0010434757724967253, -1.657832418784278e-05, 0.011319821710997937, -0.7822771141227784, 0.0, 2.3225595859977274e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.0009765079676606662, -0.0010434757724967253, -1.657832418784278e-05, 0.011319821710997937, -0.7822771141227784, 0.0, 2.3225595859977274e-05, 0.0, -0.0452344718726016, 0.031650984257200906, 0.0]

CHILD ARRAY

[[0.01355856891258608, 0.004204223877899251, 4.4421565739393014e-06, 0.07691598795667136, 3.54103696975991, -0.027046926178861664, -3.438835998409932e-05, -0.02572528580879421, 0.0, 0.0, 0.0], [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0], [0.01534822933865449, 0.0022157486537164443, -7.038222903656323e-07, 0.07799833512370635, -0.783279044781086, -0.04976954779864719, -2.871770629985305e-05, 0.0, 0.0, -0.01950218530355953, 0.0], [0.013975998765364418, -0.001329171196424373, -7.582538947709678e-06, 0.07583898273529321, -0.7835711793117774, 0.023084806586315315, 0.00014615057561240442, 0.02815563282134957, 0.0, 0.0, 0.0], [0.03315262681763732, -0.0020094706533536947, -1.580734094817634e-05, -0.019990824360256218, -0.7818550252436832, -0.02472330255354227, 4.997860119940478e-05, 0.0, 0.0, -0.0169637441952612, -0.0034706054641006484], [0.019773387549468887, -0.00719943767895455, -6.302527112827419e-07, 0.03473252338212666, -0.7832550081286177, 0.0, -3.875567125058515e-05, 0.0, 0.0, 0.0, 0.0], [0.06039504729588431, 0.0008521172687174142, -6.300921781777862e-07, 0.0730329801307714, -0.7836678004593655, 0.0, -0.00011157357809747028, 0.0, 0.0, -0.0486033021564343, 0.0], [0.01333613768958752, -0.00016250657887957799, -1.87249675466984e-05, 0.08324740009882474, -0.7830818355534419, 0.0, -3.479211964097095e-05, 0.0, 0.0, 0.03754508686406491, 0.015293134548750947], [0.0012730127606212019, -0.0006721451801570795, 7.421723358711203e-05, -0.026108672357409362, 1.0309965172328206, 0.0, -6.200430215553004e-07, 0.0, 0.0, 0.0, 0.0], [0.0009765079676606662, -0.0010434757724967253, -1.657832418784278e-05, 0.011319821710997937, -0.7822771141227784, 0.0, 2.3225595859977274e-05, 0.0, -0.0452344718726016, 0.031650984257200906, 0.0]]

FITNESS ARRAY OF CHILD

[5.41113036338942e+38, 425173264115.19244, 1.8322292654416555e+39, 3.941891317444989e+38,

4.5213712863654894e+38, 426353626257.03046, 1.329038111099788e+27, 3.387451242568351e+29, 30602641898124.37, 5.310170829980971e+26]

ITERATION - 3

Population 1	424410731339.26685	Parent 1-1	Crossover child 1	Final child 1
Population 2	425173264115.19244	Parent 2-1	Crossover child 2	Final child 2
Population 3	425226929066.0966	Parent 1-2	Crossover child 3	Final child 3
Population 4	425236238266.57776	Parent 2-2	Crossover child 4	Final child 4
Population 5	426885730764.848	Parent 1-3	Crossover child 5	Final child 5
Population 6	425173264115.19244	Parent 2-3	Crossover child 6	Final child 6
Population 7	426353626257.03046	Parent 1-4	Crossover child 7	Final child 7
Population 8	30602641898124.37	Parent 2-4	Crossover child 8	Final child 8
Population 9	5.310170829980971e+26	Parent 1-5	Crossover child 9	Final child 9
Population 10	1.329038111099788e+27	Parent 2-5	Crossover child 10	Final child 10

Current population Fitness values mating pool After crossover After mutation

Population array

[[0.016307981472373258, 0.0030021156345732374, -2.5847086771511874e-06, 0.07950860832601615, -0.7830747228947925, 0.0, -2.7328760801102547e-05, 0.0, 0.0, 0.0, 0.0], [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0], [0.013016246631645651, 0.0003050530310712928, 3.866310323809442e-06, 0.07432870953298341, -0.7837755011980708, 0.0, -3.209253274750442e-05, 0.0, 0.0, 0.0, 0.0], [0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0], [-0.0036713924954224417, -0.0012687010003726482, -1.3852884982307894e-05, -0.005283672574726471, -0.7820353104775084, 0.0, 3.855169074992219e-05, 0.0, 0.0, 0.0, 0.0], [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0], [0.019773387549468887, -0.00719943767895455, -6.302527112827419e-07, 0.03473252338212666, -0.7832550081286177, 0.0, -3.875567125058515e-05, 0.0, 0.0, 0.0, 0.0], [0.0012730127606212019, -0.0006721451801570795, 7.421723358711203e-05, -0.026108672357409362, 1.0309965172328206, 0.0, -6.200430215553004e-07, 0.0, 0.0, 0.0, 0.0], [0.0009765079676606662, -0.0010434757724967253, -1.657832418784278e-05, 0.011319821710997937, -0.7822771141227784, 0.0, 2.3225595859977274e-05, 0.0, -0.0452344718726016, 0.031650984257200906, 0.0], [0.06039504729588431, 0.0008521172687174142, -6.300921781777862e-07, 0.0730329801307714, -0.7836678004593655, 0.0, -0.0001157357809747028, 0.0, 0.0, -0.0486033021564343, 0.0]]

Mating pool - 1/5

parent 1 : [0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0]
parent 2 : [0.013016246631645651, 0.0003050530310712928, 3.866310323809442e-06, 0.07432870953298341, -0.7837755011980708, 0.0, -3.209253274750442e-05, 0.0, 0.0, 0.0, 0.0]
child 1 : [0.01321544561065596, -0.0002472953936853814, -1.6453442767718204e-05, 0.06034976500680428, -0.7831453313647833, 0.0, -2.1277440151866573e-05, 0.0, 0.0, 0.0, 0.0]

child 2 : [0.013088239248036617, 0.00010542847247551757, -3.4774632072878453e-06, 0.06927657123476584, -0.7835477511599209, 0.0, -2.8183843976412646e-05, 0.0, 0.0, 0.0, 0.0]

Child1 before mutation

[0.01321544561065596, -0.0002472953936853814, -1.6453442767718204e-05, 0.06034976500680428, -0.7831453313647833, 0.0, -2.1277440151866573e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.01321544561065596, -0.0006433211487709797, -1.6453442767718204e-05, -0.2708328005666953, -0.7831453313647833, 0.007063403419643344, -2.1277440151866573e-05, 0.0, -0.012972515048372012, 0.0, 0.0]

child2 before mutation

[0.013088239248036617, 0.00010542847247551757, -3.4774632072878453e-06, 0.06927657123476584, -0.7835477511599209, 0.0, -2.8183843976412646e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.013088239248036617, 0.00010542847247551757, 1.3813915726212951e-05, 0.06927657123476584, -0.7835477511599209, 0.04609270773912, 6.531891647283033e-07, 0.028674771068979393, 0.0, 0.0, 0.0]

Mating pool - 2/ 5

parent 1 : [0.013016246631645651, 0.0003050530310712928, 3.866310323809442e-06, 0.07432870953298341, -0.7837755011980708, 0.0, -3.209253274750442e-05, 0.0, 0.0, 0.0, 0.0]

parent 2 : [0.013287438227046927, -0.00044691995228115665, -2.379721629881549e-05, 0.05529762670858671, -0.7829175813266334, 0.0, -1.73687513807748e-05, 0.0, 0.0, 0.0, 0.0]

child 1 : [0.013007056564527747, 0.0003305356872636224, 4.80376439941857e-06, 0.07497362969809332, -0.783804574153627, 0.0, -3.2591488250861305e-05, 0.0, 0.0, 0.0, 0.0]

child 2 : [0.013296628294164831, -0.00047240260847348624, -2.473467037442462e-05, 0.0546527065434768, -0.7828885083710772, 0.0, -1.6869795877417915e-05, 0.0, 0.0, 0.0, 0.0]

child1 before mutation

[0.013007056564527747, 0.0003305356872636224, 4.80376439941857e-06, 0.07497362969809332, -0.783804574153627, 0.0, -3.2591488250861305e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.013007056564527747, 0.0003305356872636224, 4.80376439941857e-06, 0.07497362969809332, -0.783804574153627, 0.007720486718730546, -3.2591488250861305e-05, 0.0, 0.0, 0.031601323887963106, 0.0]

child2 before mutation

[0.013296628294164831, -0.00047240260847348624, -2.473467037442462e-05, 0.0546527065434768, -0.7828885083710772, 0.0, -1.6869795877417915e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.013296628294164831, -0.00047240260847348624, -2.473467037442462e-05, 0.0546527065434768, -0.7828885083710772, 0.0, -1.6869795877417915e-05, 0.0, 0.007290341436058001, 0.01288860460666666, 0.0]

Mating pool - 3/5

parent 1 : [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0]

parent 2 : [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0]
child 1 : [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667134, -0.7838320546861742, 0.0, -3.4388359984099316e-05, 0.0, 0.0, 0.0, 0.0]
child 2 : [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667134, -0.7838320546861742, 0.0, -3.4388359984099316e-05, 0.0, 0.0, 0.0, 0.0]

child1 before mutation

[0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667134, -0.7838320546861742, 0.0, -3.4388359984099316e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, -0.2437124928534818, -0.7838320546861742, 0.016969962037615083, 0.00010500151594050231, 0.044703513546315674, 0.0, 0.0, 0.03743706333599413]

child2 before mutation

[0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667134, -0.7838320546861742, 0.0, -3.4388359984099316e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.01355856891258608, 0.001136530642118993, -7.709273323371196e-06, 0.07691598795667134, -0.7838320546861742, 0.0, -0.0001457826734378444, 0.0, 0.0, 0.0, -0.011415808517690973]

Mating pool - 4/5

parent 1 : [0.013016246631645651, 0.0003050530310712928, 3.866310323809442e-06, 0.07432870953298341, -0.7837755011980708, 0.0, -3.209253274750442e-05, 0.0, 0.0, 0.0, 0.0]
parent 2 : [0.013016246631645651, 0.0003050530310712928, 3.866310323809442e-06, 0.07432870953298341, -0.7837755011980708, 0.0, -3.209253274750442e-05, 0.0, 0.0, 0.0, 0.0]
child 1 : [0.013016246631645653, 0.00030505303107129284, 3.8663103238094425e-06, 0.07432870953298343, -0.7837755011980708, 0.0, -3.209253274750443e-05, 0.0, 0.0, 0.0, 0.0]
child 2 : [0.013016246631645653, 0.00030505303107129284, 3.8663103238094425e-06, 0.07432870953298343, -0.7837755011980708, 0.0, -3.209253274750443e-05, 0.0, 0.0, 0.0, 0.0]

child1 before mutation

[0.013016246631645653, 0.00030505303107129284, 3.8663103238094425e-06, 0.07432870953298343, -0.7837755011980708, 0.0, -3.209253274750443e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[-0.04088550852193495, 0.00030505303107129284, -1.1741759287340575e-05, 0.07432870953298343, -0.7837755011980708, 0.0, -3.209253274750443e-05, 0.0, 0.0, 0.0, 0.015767137376915735]

child2 before mutation

[0.013016246631645653, 0.00030505303107129284, 3.8663103238094425e-06, 0.07432870953298343, -0.7837755011980708, 0.0, -3.209253274750443e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.04557507019534237, 0.00017452594018718697, 3.8663103238094425e-06, -0.3403217365731605, -0.7837755011980708, 0.0, 8.315457612122547e-05, 0.0, 0.0, 0.0, 0.0]

Mating pool - 5/5

parent 1 : [0.013016246631645651, 0.0003050530310712928, 3.866310323809442e-06, 0.07432870953298341, -0.7837755011980708, 0.0, -3.209253274750442e-05, 0.0, 0.0, 0.0, 0.0]

parent 2 : [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, 0.07691598795667136, -0.7838320546861741, 0.0, -3.438835998409932e-05, 0.0, 0.0, 0.0, 0.0]

child 1 : [0.013009576980713693, 0.0002948272564381558, 3.859228384501725e-06, 0.0742968903646471, -0.7837748056853878, 0.0, -3.20642979380446e-05, 0.0, 0.0, 0.0, 0.0]

child 2 : [0.013565238563518035, 0.0011467564167521298, 4.449238513247018e-06, 0.07694780712500768, -0.7838327501988569, 0.0, -3.4416594793559136e-05, 0.0, 0.0, 0.0, 0.0]

child1 before mutation

[0.013009576980713693, 0.0002948272564381558, 3.859228384501725e-06, 0.0742968903646471, -0.7837748056853878, 0.0, -3.20642979380446e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.013009576980713693, 0.0002948272564381558, 3.859228384501725e-06, 0.0742968903646471, -0.7837748056853878, -0.046708679443897165, -3.20642979380446e-05, 0.0, 0.035517270023496236, 0.0, 0.02156471290654026]

child2 before mutation

[0.013565238563518035, 0.0011467564167521298, 4.449238513247018e-06, 0.07694780712500768, -0.7838327501988569, 0.0, -3.4416594793559136e-05, 0.0, 0.0, 0.0, 0.0]

child vector after mutation

[0.03269545882000956, 0.0011467564167521298, -6.06116643773611e-07, 0.07694780712500768, 1.6044242912125268, 0.031188023305750087, -3.4416594793559136e-05, -0.0038156198840247207, 0.0, 0.0, 0.0]

CHILD ARRAY

[[0.01321544561065596, -0.0006433211487709797, -1.6453442767718204e-05, -0.2708328005666953, -0.7831453313647833, 0.007063403419643344, -2.1277440151866573e-05, 0.0, -0.012972515048372012, 0.0, 0.0], [0.013088239248036617, 0.00010542847247551757, 1.3813915726212951e-05, 0.06927657123476584, -0.7835477511599209, 0.04609270773912, 6.531891647283033e-07, 0.028674771068979393, 0.0, 0.0, 0.0], [0.013007056564527747, 0.0003305356872636224, 4.80376439941857e-06, 0.07497362969809332, -0.783804574153627, 0.007720486718730546, -3.2591488250861305e-05, 0.0, 0.0, 0.031601323887963106, 0.0], [0.013296628294164831, -0.00047240260847348624, -2.473467037442462e-05, 0.0546527065434768, -0.7828885083710772, 0.0, -1.6869795877417915e-05, 0.0, 0.007290341436058001, 0.01288860460666666, 0.0], [0.01355856891258608, 0.001136530642118993, 4.4421565739393014e-06, -0.2437124928534818, -0.7838320546861742, 0.016969962037615083, 0.00010500151594050231, 0.044703513546315674, 0.0, 0.0, 0.03743706333599413], [0.01355856891258608, 0.001136530642118993, -7.709273323371196e-06, 0.07691598795667134, -0.7838320546861742, 0.0, -0.0001457826734378444, 0.0, 0.0, 0.0, -0.011415808517690973], [-0.04088550852193495, 0.00030505303107129284, -1.1741759287340575e-05, 0.07432870953298343, -0.7837755011980708, 0.0, -3.209253274750443e-05, 0.0, 0.0, 0.0, 0.015767137376915735], [0.04557507019534237, 0.00017452594018718697, 3.8663103238094425e-06, -0.3403217365731605, -0.7837755011980708, 0.0, 8.315457612122547e-05, 0.0, 0.0, 0.0, 0.0], [0.013009576980713693, 0.0002948272564381558, 3.859228384501725e-

06, 0.0742968903646471, -0.7837748056853878, -0.046708679443897165, -3.20642979380446e-05, 0.0, 0.035517270023496236, 0.0, 0.02156471290654026], [0.03269545882000956, 0.0011467564167521298, -6.06116643773611e-07, 0.07694780712500768, 1.6044242912125268, 0.031188023305750087, -3.4416594793559136e-05, -0.0038156198840247207, 0.0, 0.0, 0.0]]

FITNESS ARRAY OF CHILD

[3.690457115241147e+37, 1.571508046150627e+39, 4.409042134583685e+37, 9.5642921275993e+25, 2.1305215250384997e+38, 1.710391333661673e+29, 3.262780351348048e+29, 442595263005.58057, 1.6137351563384156e+39, 7.194951412197298e+38]

The link to all the outputs of the 200 generations are given in https://iiitaphyd-my.sharepoint.com/:t:/g/personal/shrividhatri_m_research_iiit_ac_in/EWxgZSwLpmREsxuITQLJQ0IBiqQjvsWA8prWKXbUu3IKe=JWbA7M

The link to the outputs of the last 10 extra generations are given in https://iiitaphyd-my.sharepoint.com/:t:/g/personal/shrividhatri_m_research_iiit_ac_in/ERTqL4JAWutPmce4ZoSMhC8B-OdIxxEY87ENsyXjd6A2_Q?e=7ibwyU