```
Initial Parameters...
R(load) = 50 \text{ ohms}
r = 1.00
w = 0.90
_____
INITIAL Particle 1 :: pos(duty) = 0.90000000
                                         fitness(Output Power) = 14.82398709
INITIAL Particle 2 :: pos(duty) = 0.30000000 fitness(Output Power) = 73.79148117
INITIAL Particle 3 :: pos(duty) = 0.65000000 fitness(Output Power) = 172.58394631
______
++++++++++++++Start of Iterations++++++++++++
_____
_____
______
Iteration No: 1
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.1250
   0.1750
Particle 1 :: pos(duty) = 0.77500000 fitness(Output Power) = 75.15135528
Particle 2 :: pos(duty) = 0.47500000 fitness(Output Power) = 123.40983699
Particle 3 :: pos(duty) = 0.65000000
                                  fitness (Output Power) = 172.58394631
Updated best Fitness Position = 0.65000000
Iteration No: 2
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.1750
   0.2450
Particle 1 :: pos(duty) = 0.60000000
                                  fitness(Output Power) = 176.72577189
           pos(duty) = 0.72000000
Particle 2 ::
                                  fitness(Output Power) = 116.22584494
Particle 3 :: pos(duty) = 0.65000000
                                  fitness(Output Power) = 172.58394631
Updated best Fitness Position = 0.60000000
_____
Iteration No: 3
c1 = 0.50000000 c2 = 0.50000000
velocity =
```

```
-0.1575
   0.0380
  -0.0250
Particle 1 :: pos(duty) = 0.44250000 fitness(Output Power) = 111.33922692
Particle 2 :: pos(duty) = 0.75800000
                                        fitness(Output Power) = 86.91770716
Particle 3 ::
             pos(duty) = 0.62500000 fitness(Output Power) = 180.13828962
Updated best Fitness Position = 0.62500000
_____
Iteration No: 4
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.0282
  -0.1738
  -0.0225
Particle 1 :: pos(duty) = 0.47075000 fitness(Output Power) = 121.88377447
Particle 2 :: pos(duty) = 0.58420000 fitness(Output Power) = 171.22237974
Particle 3 :: pos(duty) = 0.60250000 fitness(Output Power) = 177.40666055
Updated best Fitness Position = 0.62500000
Iteration No: 5
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.1025
  -0.1360
   0.0022
Particle 1 :: pos(duty) = 0.57330000 fitness(Output Power) = 166.71991743
Particle 2 :: pos(duty) = 0.44818000 fitness(Output Power) = 113.42255545
Particle 3 :: pos(duty) = 0.60475000 fitness(Output Power) = 177.96749201
Updated best Fitness Position = 0.60475000
Iteration No: 6
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.1080
   0.0239
   0.0020
```

```
Particle 1 ::
               pos(duty) = 0.68132000
                                         fitness(Output Power) = 149.27919330
              pos(duty) = 0.47205700
Particle 2 ::
                                         fitness(Output Power) = 122.19151446
Particle 3 ::
               pos(duty) = 0.60677500
                                         fitness (Output Power) = 178.42674045
Updated best Fitness Position = 0.60677500
_____
Iteration No: 7
c1 = 0.50000000
                 c2 = 0.50000000
velocity =
   0.0059
   0.0888
   0.0018
Particle 1 ::
                           0.68725550
                                         fitness(Output Power) = 144.16661272
             pos(duty)=
Particle 2 :: pos(duty)=
                           0.56090530 fitness(Output Power) = 161.17873608
Particle 3 :: pos(duty) = 0.60859750 fitness(Output Power) = 178.82705206
Updated best Fitness Position = 0.60859750
Iteration No: 8
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0910
   0.1038
   0.0016
Particle 1 :: pos(duty) = 0.59629070 fitness(Output Power) = 175.58771581
                                        fitness(Output Power) = 162.82556623
Particle 2 ::
              pos(duty) = 0.66471487
Particle 3 ::
              pos(duty)=
                          0.61023775
                                        fitness(Output Power) = 179.12541508
Updated best Fitness Position = 0.61023775
Iteration No: 9
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0749
   0.0662
   0.0015
Particle 1 ::
             pos(duty) = 0.52139590
                                        fitness(Output Power) = 143.05486866
Particle 2 :: pos(duty) = 0.73090492 fitness(Output Power) = 107.43212610
Particle 3 :: pos(duty) = 0.61171397 fitness(Output Power) = 179.36415841
```

```
Updated best Fitness Position = 0.61171397
Iteration No: 10
c1 = 0.50000000
                 c2 = 0.50000000
velocity =
   0.0152
   -0.0331
   0.0013
Particle 1 ::
             pos(duty) = 0.53659702
                                        fitness(Output Power) = 149.95425172
Particle 2 :: pos(duty) = 0.69778547 fitness(Output Power) = 135.04117196
Particle 3 :: pos(duty) = 0.61304258 fitness(Output Power) = 179.57095519
Updated best Fitness Position = 0.61304258
Iteration No: 11
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.0519
  -0.0722
   0.0012
Particle 1 :: pos(duty) = 0.58850081
                                       fitness (Output Power) = 172.90495365
Particle 2 :: pos(duty) = 0.62560652 fitness(Output Power) = 180.10256456
             pos(duty) = 0.61423832
Particle 3 ::
                                        fitness(Output Power) = 179.73225045
Updated best Fitness Position = 0.62560652
-----
Iteration No: 12
c1 = 0.50000000
                 c2 = 0.50000000
velocity =
   0.0653
  -0.0650
   0.0068
             pos(duty) = 0.65376707 fitness(Output Power) = 170.36923275
Particle 1 ::
Particle 2 :: pos(duty) = 0.56064546 fitness(Output Power) = 161.04340513
Particle 3 :: pos(duty) = 0.62099859 fitness(Output Power) = 180.21197174
```

```
_____
Iteration No: 13
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.0097
   0.0042
   0.0061
Particle 1 :: pos(duty) = 0.66348933
                                        fitness(Output Power) = 163.76302040
Particle 2 :: pos(duty) = 0.56483760 fitness(Output Power) = 163.00444361
Particle 3 :: pos(duty) = 0.62708283 fitness(Output Power) = 179.98674573
Updated best Fitness Position = 0.62099859
_____
Iteration No: 14
c1 = 0.50000000
                  c2 = 0.50000000
velocity =
  -0.0500
   0.0319
  -0.0006
Particle 1 :: pos(duty) = 0.61349973 fitness(Output Power) = 179.63847150
Particle 2 :: pos(duty) = 0.59669102
                                       fitness(Output Power) = 175.69446321
             pos(duty) = 0.62647440
Particle 3 ::
                                        fitness(Output Power) = 180.04542962
Updated best Fitness Position = 0.62647440
Iteration No: 15
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0385
   0.0436
  -0.0005
Particle 1 :: pos(duty) = 0.57499643
                                        fitness(Output Power) = 167.45291661
Particle 2 :: pos(duty) = 0.64025079 fitness(Output Power) = 177.02709809
Particle 3 :: pos(duty) = 0.62592682 fitness(Output Power) = 180.08239806
Updated best Fitness Position = 0.62592682
Iteration No: 16
c1 = 0.50000000 c2 = 0.50000000
velocity =
```

```
0.0101
   0.0320
  -0.0005
Particle 1 :: pos(duty) = 0.58506030
                                         fitness(Output Power) = 171.62452877
Particle 2 ::
             pos(duty) = 0.67229260
                                         fitness(Output Power) = 156.85385458
Particle 3 :: pos(duty) = 0.62543400
                                         fitness(Output Power) = 180.11515958
Updated best Fitness Position = 0.62543400
_____
Iteration No: 17
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.0292
  -0.0106
  -0.0004
Particle 1 :: pos(duty) = 0.61430464
                                         fitness(Output Power) = 179.73225045
Particle 2 :: pos(duty) = 0.66168002
                                        fitness(Output Power) = 165.05625018
              pos(duty) = 0.62499046 fitness(Output Power) = 180.14363943
Particle 3 ::
Updated best Fitness Position = 0.62499046
Iteration No: 18
c1 = 0.50000000
                 c2 = 0.50000000
velocity =
   0.0317
  -0.0279
  -0.0004
Particle 1 ::
                                         fitness(Output Power) = 174.64812846
             pos(duty) = 0.64596745
Particle 2 :: pos(duty) = 0.63378392 fitness(Output Power) = 178.91859379
Particle 3 :: pos(duty) = 0.62459127
                                        fitness(Output Power) = 180.16328945
Updated best Fitness Position = 0.62459127
Iteration No: 19
c1 = 0.50000000
                   c2 = 0.50000000
velocity =
   0.0020
  -0.0297
  -0.0004
```

```
Particle 1 ::
           pos(duty) = 0.64794448
                                   fitness(Output Power) = 173.66056932
Particle 2 ::
           pos(duty) = 0.60408110
                                   fitness (Output Power) = 177.82504101
Particle 3 :: pos(duty) = 0.62423200
                                   fitness(Output Power) = 180.17617297
Updated best Fitness Position = 0.62423200
_____
Iteration No: 20
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0269
  -0.0018
  -0.0003
Particle 1 :: pos(duty) = 0.62104765 fitness(Output Power) = 180.21197174
Particle 2 :: pos(duty) = 0.60227542
                                  fitness (Output Power) = 177.32630921
             pos(duty) = 0.62390866
Particle 3 ::
                                   fitness(Output Power) = 180.18744860
Updated best Fitness Position = 0.62104765
_____
Initial Parameters...
R(load) = 50 \text{ ohms}
r = 1.00
w = 0.90
-----
INITIAL Particle 1 :: pos(duty) = 0.62104765
                                          fitness(Output Power) = 131.56055018
                                         fitness(Output Power) = 138.66079171
INITIAL Particle 2 :: pos(duty) = 0.60227542
INITIAL Particle 3 ::
                   pos(duty)=
                              0.62390866
                                          fitness (Output Power) = 130.17817076
_____
_____
+++++++++ Irrediance = 800 W/sqm +++++++++
_____
Iteration No: 1
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0242
  0.0235
  -0.0017
Particle 1 :: pos(duty) = 0.59684050 fitness(Output Power) = 139.92928285
Particle 2 :: pos(duty) = 0.62579067 fitness(Output Power) = 129.23321016
            pos(duty) = 0.62218715
Particle 3 ::
                                   fitness(Output Power) = 131.03414504
```

```
Updated best Fitness Position = 0.59684050
_____
Iteration No: 2
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0218
   0.0107
  -0.0142
Particle 1 :: pos(duty) = 0.57505407
                                       fitness(Output Power) = 141.27016398
Particle 2 :: pos(duty) = 0.63647594 fitness(Output Power) = 123.37751128
Particle 3 :: pos(duty) = 0.60796446 fitness(Output Power) = 136.95687079
Updated best Fitness Position = 0.57505407
_____
Iteration No: 3
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0196
  -0.0224
  -0.0293
Particle 1 :: pos(duty) = 0.55544628 fitness(Output Power) = 138.53436608
             pos(duty) = 0.61403573
Particle 2 ::
                                        fitness(Output Power) = 134.68289252
Particle 3 :: pos(duty) = 0.57870885 fitness(Output Power) = 141.42168080
Updated best Fitness Position = 0.57870885
_____
Iteration No: 4
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.0038
  -0.0379
  -0.0263
Particle 1 :: pos(duty) = 0.55923445 fitness(Output Power) = 139.28485841
Particle 2 :: pos(duty) = 0.57617611
                                       fitness(Output Power) = 141.33284056
              pos(duty) = 0.55237880
                                        fitness(Output Power) = 137.86040962
Particle 3 ::
```

```
Iteration No: 5
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.0131
  -0.0328
   0.0026
Particle 1 :: pos(duty) = 0.57238101 fitness(Output Power) = 141.07745595
Particle 2 :: pos(duty) = 0.54336882 fitness(Output Power) = 135.69627529
Particle 3 :: pos(duty) = 0.55501181 fitness(Output Power) = 138.45945182
Updated best Fitness Position = 0.57617611
_____
Iteration No: 6
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.0137
   0.0033
   0.0130
Particle 1 :: pos(duty) = 0.58611045
                                        fitness(Output Power) = 141.28606406
             pos(duty) = 0.54664955
Particle 2 ::
                                        fitness (Output Power) = 136.50580921
Particle 3 :: pos(duty) = 0.56796366 fitness(Output Power) = 140.62243255
Updated best Fitness Position = 0.58611045
Iteration No: 7
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.0124
   0.0227
   0.0207
Particle 1 :: pos(duty) = 0.59846696 fitness(Output Power) = 139.58678922
Particle 2 :: pos(duty) = 0.56933266 fitness(Output Power) = 140.77509391
Particle 3 :: pos(duty) = 0.58869373 fitness(Output Power) = 141.08987283
Updated best Fitness Position = 0.58611045
_____
Iteration No: 8
                 c2 = 0.50000000
c1 = 0.50000000
```

```
velocity =
  -0.0012
   0.0288
   0.0174
Particle 1 :: pos(duty) = 0.59723131 fitness(Output Power) = 139.85563261
Particle 2 :: pos(duty) = 0.59813635 fitness(Output Power) = 139.66532958
Particle 3 :: pos(duty) = 0.60605915 fitness(Output Power) = 137.57409058
Updated best Fitness Position = 0.58869373
Iteration No: 9
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0054
   0.0068
  -0.0017
Particle 1 :: pos(duty) = 0.59185043 fitness(Output Power) = 140.73458614
Particle 2 :: pos(duty) = 0.60493652 fitness(Output Power) = 137.90856932
Particle 3 :: pos(duty) = 0.60432261 fitness(Output Power) = 138.10896481
Updated best Fitness Position = 0.59185043
_____
Iteration No: 10
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0048
  -0.0182
  -0.0078
Particle 1 :: pos(duty) = 0.58700764 fitness(Output Power) = 141.22874434
Particle 2 :: pos(duty) = 0.58671169 fitness(Output Power) = 141.25120705
Particle 3 :: pos(duty) = 0.59652363 fitness(Output Power) = 139.98357521
Updated best Fitness Position = 0.58671169
_____
Iteration No: 11
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0045
  -0.0164
```

```
-0.0119
Particle 1 ::
             pos(duty) = 0.58250116
                                        fitness(Output Power) = 141.42904741
Particle 2 :: pos(duty) = 0.57030935 fitness(Output Power) = 140.88199780
                                        fitness (Output Power) = 141.36605019
Particle 3 :: pos(duty) = 0.58459858
Updated best Fitness Position = 0.58250116
Iteration No: 12
c1 = 0.50000000
                  c2 = 0.50000000
velocity =
  -0.0041
  -0.0005
  -0.0118
Particle 1 :: pos(duty) = 0.57844532
                                        fitness(Output Power) = 141.41582962
Particle 2 :: pos(duty) = 0.56984432
                                        fitness(Output Power) = 140.83743039
Particle 3 :: pos(duty) = 0.57281733 fitness(Output Power) = 141.11120503
Updated best Fitness Position = 0.58250116
Iteration No: 13
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.0004
   0.0143
   0.0001
Particle 1 :: pos(duty) = 0.57885091 fitness(Output Power) = 141.42435983
Particle 2 :: pos(duty) = 0.58418790 fitness(Output Power) = 141.38400521
Particle 3 :: pos(duty) = 0.57294674 fitness(Output Power) = 141.12206773
Updated best Fitness Position = 0.57885091
Iteration No: 14
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.0004
   0.0102
   0.0031
Particle 1 :: pos(duty) = 0.57921593
                                       fitness(Output Power) = 141.43141765
Particle 2 :: pos(duty) = 0.59442862 fitness(Output Power) = 140.35609641
```

```
Particle 3 :: pos(duty) = 0.57601529
                                        fitness(Output Power) = 141.32658945
Updated best Fitness Position = 0.57921593
_____
Iteration No: 15
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.0003
  -0.0035
   0.0044
Particle 1 :: pos(duty) = 0.57954445 fitness(Output Power) = 141.43701855
Particle 2 :: pos(duty) = 0.59091857
                                       fitness(Output Power) = 140.86108918
Particle 3 ::
                           0.58037731
                                      fitness(Output Power) = 141.44450725
             pos(duty)=
Updated best Fitness Position = 0.58037731
_____
Iteration No: 16
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.0007
  -0.0084
   0.0039
Particle 1 ::
             pos(duty) = 0.58025655 fitness(Output Power) = 141.44391069
Particle 2 :: pos(duty) = 0.58248889 fitness(Output Power) = 141.42904741
                                       fitness(Output Power) = 141.37972465
Particle 3 :: pos(duty) = 0.58430312
Updated best Fitness Position = 0.58037731
Iteration No: 17
c1 = 0.50000000
                  c2 = 0.50000000
velocity =
   0.0007
  -0.0086
  -0.0004
Particle 1 :: pos(duty) = 0.58095782
                                        fitness(Output Power) = 141.44533622
              pos(duty) = 0.57384639
Particle 2 ::
                                        fitness (Output Power) = 141.19275826
Particle 3 ::
             pos(duty) = 0.58391054 fitness(Output Power) = 141.39214702
```

```
_____
Iteration No: 18
c1 = 0.50000000
                   c2 = 0.50000000
velocity =
   0.0006
   0.0001
  -0.0018
Particle 1 :: pos(duty) = 0.58158896 fitness(Output Power) = 141.44196775
Particle 2 :: pos(duty) = 0.57394511
                                        fitness(Output Power) = 141.20210087
Particle 3 ::
               pos(duty) = 0.58208086
                                         fitness(Output Power) = 141.43669763
Updated best Fitness Position = 0.58095782
_____
Iteration No: 19
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0001
   0.0036
  -0.0022
             pos(duty) = 0.58152585
Particle 1 ::
                                        fitness (Output Power) = 141.44290944
Particle 2 :: pos(duty) = 0.57754031 fitness(Output Power) = 141.38576456
Particle 3 :: pos(duty) = 0.57987262 fitness(Output Power) = 141.43995065
Updated best Fitness Position = 0.58152585
Iteration No: 20
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0001
   0.0052
  -0.0012
Particle 1 :: pos(duty) = 0.58146905 fitness(Output Power) = 141.44290944
Particle 2 :: pos(duty) = 0.58276876 fitness(Output Power) = 141.42434020
Particle 3 ::
                                        fitness(Output Power) = 141.42168080
             pos(duty) = 0.57871182
Updated best Fitness Position = 0.58146905
Initial Parameters...
```

```
R(load) = 50 \text{ ohms}
r = 1.00
w = 0.90
_____
INITIAL Particle 1 :: pos(duty) = 0.58146905
                                      fitness(Output Power) = 91.59413555
INITIAL Particle 2 :: pos(duty) = 0.58276876 fitness(Output Power) = 91.12814002
INITIAL Particle 3 :: pos(duty) = 0.57871182 fitness(Output Power) = 92.57286539
_____
_____
_____
_____
Iteration No: 1
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0001
   0.0041
   0.0009
Particle 1 :: pos(duty) = 0.58141792 fitness(Output Power) = 91.62314966
Particle 2 :: pos(duty) = 0.58682451 fitness(Output Power) = 89.65205745
Particle 3 :: pos(duty) = 0.57962611
                               fitness(Output Power) = 92.25801128
Updated best Fitness Position = 0.57987262
_____
Iteration No: 2
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0008
  -0.0019
   0.0011
Particle 1 :: pos(duty) = 0.58059926 fitness(Output Power) = 91.91255179
Particle 2 :: pos(duty) = 0.58497087 fitness(Output Power) = 90.33460158
           pos(duty) = 0.58069549 fitness(Output Power) = 91.88367276
Particle 3 ::
Updated best Fitness Position = 0.57987262
_____
Iteration No: 3
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0011
```

```
-0.0042
   0.0001
Particle 1 :: pos(duty) = 0.57949915 fitness(Output Power) = 92.28670732
Particle 2 :: pos(duty) = 0.58075347 fitness(Output Power) = 91.85478001
Particle 3 :: pos(duty) = 0.58083506 fitness(Output Power) = 91.82587359
Updated best Fitness Position = 0.57949915
_____
Iteration No: 4
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0010
  -0.0044
  -0.0010
                                       fitness(Output Power) = 92.62991924
Particle 1 :: pos(duty) = 0.57850905
Particle 2 :: pos(duty) = 0.57633065 fitness(Output Power) = 93.39406951
Particle 3 :: pos(duty) = 0.57981150 fitness(Output Power) = 92.17183711
Updated best Fitness Position = 0.57633065
Iteration No: 5
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0020
  -0.0040
  -0.0027
Particle 1 :: pos(duty) = 0.57652876 fitness(Output Power) = 93.30974021
Particle 2 :: pos(duty) = 0.57235011
                                      fitness(Output Power) = 94.72190346
Particle 3 :: pos(duty) = 0.57714987 fitness(Output Power) = 93.11240025
Updated best Fitness Position = 0.57235011
_____
Iteration No: 6
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0039
  -0.0036
  -0.0048
```

Particle 1 :: pos(duty) = 0.57265717 fitness(Output Power) = 94.61287999

```
Particle 2 :: pos(duty) = 0.56876763 fitness(Output Power) = 95.84674713
Particle 3 :: pos(duty) = 0.57235453 fitness(Output Power) = 94.72190346
Updated best Fitness Position = 0.56876763
Iteration No: 7
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0054
  -0.0032
  -0.0061
Particle 1 :: pos(duty) = 0.56722797
                                        fitness(Output Power) = 96.31681553
Particle 2 :: pos(duty) = 0.56554339
                                       fitness(Output Power) = 96.80442032
Particle 3 :: pos(duty) = 0.56624527 fitness(Output Power) = 96.60022416
Updated best Fitness Position = 0.56554339
_____
Iteration No: 8
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0057
  -0.0029
  -0.0058
Particle 1 :: pos(duty) = 0.56149941 fitness(Output Power) = 97.96874781
Particle 2 :: pos(duty) = 0.56264158 fitness(Output Power) = 97.65304609
Particle 3 :: pos(duty) = 0.56039600 fitness(Output Power) = 98.25554758
Updated best Fitness Position = 0.56039600
Iteration No: 9
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0057
  -0.0037
  -0.0053
Particle 1 :: pos(duty) = 0.55579199
                                       fitness(Output Power) = 99.39835386
Particle 2 :: pos(duty) = 0.55890716 fitness(Output Power) = 98.63070891
Particle 3 :: pos(duty) = 0.55513165 fitness(Output Power) = 99.55105843
```

```
Iteration No: 10
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0055
  -0.0052
  -0.0047
Particle 1 :: pos(duty) = 0.55032515
                                       fitness(Output Power) = 100.60222267
Particle 2 :: pos(duty) = 0.55365842
                                        fitness(Output Power) = 99.89277540
Particle 3 :: pos(duty) = 0.55039374 fitness(Output Power) = 100.58272158
Updated best Fitness Position = 0.55032515
_____
Iteration No: 11
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0049
  -0.0064
  -0.0043
Particle 1 :: pos(duty) = 0.54540499 fitness(Output Power) = 101.49656790
Particle 2 :: pos(duty) = 0.54726792 fitness(Output Power) = 101.18250719
Particle 3 :: pos(duty) = 0.54609532 fitness(Output Power) = 101.37653091
Updated best Fitness Position = 0.54540499
-----
Iteration No: 12
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0044
  -0.0067
  -0.0042
Particle 1 :: pos(duty) = 0.54097684 fitness(Output Power) = 102.15656932
Particle 2 :: pos(duty) = 0.54058500
                                      fitness(Output Power) = 102.21369536
Particle 3 :: pos(duty) = 0.54188158 fitness(Output Power) = 102.03920662
Updated best Fitness Position = 0.54058500
```

```
Iteration No: 13
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0042
  -0.0060
  -0.0044
Particle 1 :: pos(duty) = 0.53679560 fitness(Output Power) = 102.65505097
Particle 2 :: pos(duty) = 0.53457038 fitness(Output Power) = 102.87508316
Particle 3 :: pos(duty) = 0.53744092 fitness(Output Power) = 102.58313449
Updated best Fitness Position = 0.53457038
Iteration No: 14
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0049
  -0.0054
  -0.0054
Particle 1 :: pos(duty) = 0.53191986 fitness(Output Power) = 103.08008626
Particle 2 :: pos(duty) = 0.52915721
                                       fitness (Output Power) = 103.24962286
Particle 3 :: pos(duty) = 0.53200906 fitness(Output Power) = 103.07165096
Updated best Fitness Position = 0.52915721
Iteration No: 15
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0058
  -0.0049
  -0.0063
Particle 1 :: pos(duty) = 0.52615038
                                       fitness(Output Power) = 103.36956200
             pos(duty) = 0.52428537
Particle 2 ::
                                        fitness (Output Power) = 103.41651331
Particle 3 :: pos(duty) = 0.52569446 fitness(Output Power) = 103.38505295
Updated best Fitness Position = 0.52428537
_____
Iteration No: 16
c1 = 0.50000000 c2 = 0.50000000
velocity =
```

```
-0.0061
  -0.0044
  -0.0064
Particle 1 :: pos(duty) = 0.52002534 fitness(Output Power) = 103.44445001
Particle 2 :: pos(duty) = 0.51990070
                                        fitness(Output Power) = 103.44351064
             pos(duty) = 0.51930677 fitness(Output Power) = 103.43855345
Particle 3 ::
Updated best Fitness Position = 0.52002534
_____
Iteration No: 17
c1 = 0.50000000 c2 = 0.50000000
velocity =
  -0.0055
  -0.0039
  -0.0054
Particle 1 :: pos(duty) = 0.51451280 fitness(Output Power) = 103.32103682
Particle 2 :: pos(duty) = 0.51601682 fitness(Output Power) = 103.37154423
Particle 3 :: pos(duty) = 0.51391714 fitness(Output Power) = 103.29704664
Updated best Fitness Position = 0.52002534
Iteration No: 18
c1 = 0.50000000 c2 = 0.50000000
velocity =
  1.0e-03 *
   0.5513
   0.4507
   0.8982
Particle 1 :: pos(duty) = 0.51506405 fitness(Output Power) = 103.34284764
Particle 2 :: pos(duty) = 0.51646753 fitness(Output Power) = 103.38411112
Particle 3 :: pos(duty) = 0.51481538 fitness(Output Power) = 103.33221273
Updated best Fitness Position = 0.51646753
_____
Iteration No: 19
c1 = 0.50000000 c2 = 0.50000000
velocity =
   0.0012
   0.0004
```

```
0.0016
```

```
Particle 1 :: pos(duty) = 0.51626192 fitness(Output Power) = 103.38005287

Particle 2 :: pos(duty) = 0.51687316 fitness(Output Power) = 103.39550705

Particle 3 :: pos(duty) = 0.51644988 fitness(Output Power) = 103.38411112
```

Iteration No: 20
c1 = 0.50000000 c2 = 0.50000000
velocity =

0.0014 0.0004 0.0017

Particle 1 :: pos(duty) = 0.51764562 fitness(Output Power) = 103.41193154

Particle 2 :: pos(duty) = 0.51723823 fitness(Output Power) = 103.40245989

Particle 3 :: pos(duty) = 0.51813257 fitness(Output Power) = 103.42026480

Updated best Fitness Position = 0.51813257

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