

unknown

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1 "E:\1 2\3 2\2\1\1\1_2\1_LW_2\6 2 python code\01_My_Python_Code\Scripts\python.exe" "D:\Python\Pycharm\setroute\PyCharm Community Edition 2021.2.3\plugins\python-ce\helpers\pydev\pydevconsole.py" --mode=client --port=26569
2
3 import sys; print('Python %s on %s' % (sys.version, sys.platform))
4 sys.path.extend(['E:\1 2\2\1\1\1_2\1_LW_2\6 2 python code\01_My_Python_Code', 'E:/1 2\2\1\1\1_2\1_LW_2\6 2 python code/01_My_Python_Code'])
5
6 PyDev console: starting.
7
8 Python 3.9.7 (tags/v3.9.7:1016ef3, Aug 30 2021, 20:19:38) [MSC v.1929 64 bit (AMD64)] on win32
9 >>> runfile('E:/1 2\2\1\1\1_2\1_LW_2\6 2 python code\01_My_Python_Code/main_BACASP_offical_PSO_2D_Bin_berth_line.py', wdir='E:/1 2\2\1\1\1_2\1_LW_2\6 2 python code/01_My_Python_Code')
10 Backend TkAgg is interactive backend. Turning interactive mode on.
11 Waiting 1s.....
12
13 This is the R_8_3_standerd_test.xlsx optimization process.
14
15 Start
16     Read basic data
17         V = 8
18         T = 36
19         Q = 23
20         L = 30
21 PSO parameter setting:
22     Trail = 31
23     maxIter_num = 20
24     W_inertia = 2.0
25     order_type_num = 25
26         c1 = 1.5
27         c2 = 1.5
28     r1 = 0.44394105593080846
29     r2 = 0.44394105593080846
30 Begin iteration:
31
32 iter = 0
33     cord_individual_obj[individual_i, :] = [ 0.  4. 159. 163.]
34     cord_individual_obj[individual_i, :] = [ 1.  5. 17. 22.]
35     cord_individual_obj[individual_i, :] = [ 2.  5. 14. 19.]
36     cord_individual_obj[individual_i, :] = [ 3.  6. 31. 37.]
37     cord_individual_obj[individual_i, :] = [ 4.  4. 70. 74.]
38     cord_individual_obj[individual_i, :] = [ 5.  4. 96. 100.]
39     cord_individual_obj[individual_i, :] = [ 6.  4. 149. 153.]
40     cord_individual_obj[individual_i, :] = [ 7.  5. 28. 33.]
41     cord_individual_obj[individual_i, :] = [ 8.  4. 60. 64.]
42     cord_individual_obj[individual_i, :] = [ 9.  5. 30. 35.]
43     cord_individual_obj[individual_i, :] = [10.  4. 39. 43.]
44     cord_individual_obj[individual_i, :] = [11.  5. 28. 33.]
45     cord_individual_obj[individual_i, :] = [12.  4. 94. 98.]
46     cord_individual_obj[individual_i, :] = [13.  5. 68. 73.]
47     cord_individual_obj[individual_i, :] = [14.  4. 47. 51.]
48     cord_individual_obj[individual_i, :] = [15.  5. 32. 37.]
49     cord_individual_obj[individual_i, :] = [16.  5. 36. 41.]
50     cord_individual_obj[individual_i, :] = [17.  5. 79. 84.]
51     cord_individual_obj[individual_i, :] = [18.  4. 88. 92.]
52     cord_individual_obj[individual_i, :] = [19.  5. 32. 37.]
53     cord_individual_obj[individual_i, :] = [20.  6. 28. 34.]
54     cord_individual_obj[individual_i, :] = [21.  4. 102. 106.]
55     cord_individual_obj[individual_i, :] = [22.  4. 73. 77.]
56     cord_individual_obj[individual_i, :] = [23.  6. 36. 42.]
57     cord_individual_obj[individual_i, :] = [24.  5. 64. 69.]
58
59 min(cord_individual_obj[:, 3]) = 19.0
60 historl_G_best_iter[iter, 3] = 19.0
61 Begin iteration:
62
63 iter = 1
64     cord_individual_obj[individual_i, :] = [ 0.  5. 14. 19.]
65     cord_individual_obj[individual_i, :] = [ 1.  5. 60. 65.]
66     cord_individual_obj[individual_i, :] = [ 2.  5. 15. 20.]
67     cord_individual_obj[individual_i, :] = [ 3.  4. 24. 28.]
68     cord_individual_obj[individual_i, :] = [ 4.  4. 13. 17.]
69     cord_individual_obj[individual_i, :] = [ 5.  3. 22. 25.]
70     cord_individual_obj[individual_i, :] = [ 6.  5. 31. 36.]
71     cord_individual_obj[individual_i, :] = [ 7.  4. 22. 26.]
72     cord_individual_obj[individual_i, :] = [ 8.  4. 104. 108.]
73     cord_individual_obj[individual_i, :] = [ 9.  3. 27. 30.]
74     cord_individual_obj[individual_i, :] = [10.  5. 23. 28.]
75     cord_individual_obj[individual_i, :] = [11.  4. 45. 49.]
76     cord_individual_obj[individual_i, :] = [12.  4. 8. 12.]
77     cord_individual_obj[individual_i, :] = [13.  4. 77. 81.]
78     cord_individual_obj[individual_i, :] = [14.  4. 44. 48.]
79     cord_individual_obj[individual_i, :] = [15.  4. 55. 59.]

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80 cord_individual_obj[indivial_i,:] = [16. 3. 21. 24.]
81 cord_individual_obj[indivial_i,:] = [17. 5. 37. 42.]
82 cord_individual_obj[indivial_i,:] = [18. 3. 21. 24.]
83 cord_individual_obj[indivial_i,:] = [19. 5. 79. 84.]
84 cord_individual_obj[indivial_i,:] = [20. 4. 47. 51.]
85 cord_individual_obj[indivial_i,:] = [21. 4. 104. 108.]
86 cord_individual_obj[indivial_i,:] = [22. 4. 103. 107.]
87 cord_individual_obj[indivial_i,:] = [23. 3. 35. 38.]
88 cord_individual_obj[indivial_i,:] = [24. 5. 23. 28.]
89
90 min(cord_individual_obj[:,3]) = 12.0
91 historl_G_best_iter[iter,3] = 12.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 4. 17. 21.]
96 cord_individual_obj[indivial_i,:] = [ 1. 5. 50. 55.]
97 cord_individual_obj[indivial_i,:] = [ 2. 5. 12. 17.]
98 cord_individual_obj[indivial_i,:] = [ 3. 5. 34. 39.]
99 cord_individual_obj[indivial_i,:] = [ 4. 4. 80. 84.]
100 cord_individual_obj[indivial_i,:] = [ 5. 5. 70. 75.]
101 cord_individual_obj[indivial_i,:] = [ 6. 5. 51. 56.]
102 cord_individual_obj[indivial_i,:] = [ 7. 6. 44. 50.]
103 cord_individual_obj[indivial_i,:] = [ 8. 4. 8. 12.]
104 cord_individual_obj[indivial_i,:] = [ 9. 5. 11. 16.]
105 cord_individual_obj[indivial_i,:] = [10. 4. 66. 70.]
106 cord_individual_obj[indivial_i,:] = [11. 5. 21. 26.]
107 cord_individual_obj[indivial_i,:] = [12. 4. 43. 47.]
108 cord_individual_obj[indivial_i,:] = [13. 5. 31. 36.]
109 cord_individual_obj[indivial_i,:] = [14. 4. 34. 38.]
110 cord_individual_obj[indivial_i,:] = [15. 5. 81. 86.]
111 cord_individual_obj[indivial_i,:] = [16. 4. 9. 13.]
112 cord_individual_obj[indivial_i,:] = [17. 4. 38. 42.]
113 cord_individual_obj[indivial_i,:] = [18. 5. 58. 63.]
114 cord_individual_obj[indivial_i,:] = [19. 3. 63. 66.]
115 cord_individual_obj[indivial_i,:] = [20. 6. 15. 21.]
116 cord_individual_obj[indivial_i,:] = [21. 4. 147. 151.]
117 cord_individual_obj[indivial_i,:] = [22. 5. 52. 57.]
118 cord_individual_obj[indivial_i,:] = [23. 4. 49. 53.]
119 cord_individual_obj[indivial_i,:] = [24. 5. 18. 23.]
120
121 min(cord_individual_obj[:,3]) = 12.0
122 historl_G_best_iter[iter,3] = 12.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 4. 20. 24.]
127 cord_individual_obj[indivial_i,:] = [ 1. 4. 43. 47.]
128 cord_individual_obj[indivial_i,:] = [ 2. 4. 10. 14.]
129 cord_individual_obj[indivial_i,:] = [ 3. 5. 19. 24.]
130 cord_individual_obj[indivial_i,:] = [ 4. 4. 24. 28.]
131 cord_individual_obj[indivial_i,:] = [ 5. 4. 25. 29.]
132 cord_individual_obj[indivial_i,:] = [ 6. 4. 22. 26.]
133 cord_individual_obj[indivial_i,:] = [ 7. 4. 19. 23.]
134 cord_individual_obj[indivial_i,:] = [ 8. 4. 7. 11.]
135 cord_individual_obj[indivial_i,:] = [ 9. 4. 67. 71.]
136 cord_individual_obj[indivial_i,:] = [10. 4. 23. 27.]
137 cord_individual_obj[indivial_i,:] = [11. 4. 34. 38.]
138 cord_individual_obj[indivial_i,:] = [12. 4. 36. 40.]
139 cord_individual_obj[indivial_i,:] = [13. 4. 37. 41.]
140 cord_individual_obj[indivial_i,:] = [14. 4. 15. 19.]
141 cord_individual_obj[indivial_i,:] = [15. 4. 62. 66.]
142 cord_individual_obj[indivial_i,:] = [16. 4. 23. 27.]
143 cord_individual_obj[indivial_i,:] = [17. 5. 24. 29.]
144 cord_individual_obj[indivial_i,:] = [18. 4. 23. 27.]
145 cord_individual_obj[indivial_i,:] = [19. 5. 16. 21.]
146 cord_individual_obj[indivial_i,:] = [20. 5. 50. 55.]
147 cord_individual_obj[indivial_i,:] = [21. 4. 8. 12.]
148 cord_individual_obj[indivial_i,:] = [22. 3. 15. 18.]
149 cord_individual_obj[indivial_i,:] = [23. 5. 14. 19.]
150 cord_individual_obj[indivial_i,:] = [24. 4. 31. 35.]
151
152 min(cord_individual_obj[:,3]) = 11.0
153 historl_G_best_iter[iter,3] = 11.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 5. 34. 39.]
158 cord_individual_obj[indivial_i,:] = [ 1. 5. 30. 35.]
159 cord_individual_obj[indivial_i,:] = [ 2. 4. 59. 63.]
160 cord_individual_obj[indivial_i,:] = [ 3. 5. 30. 35.]
161 cord_individual_obj[indivial_i,:] = [ 4. 4. 54. 58.]
162 cord_individual_obj[indivial_i,:] = [ 5. 5. 69. 74.]
163 cord_individual_obj[indivial_i,:] = [ 6. 3. 74. 77.]

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164 cord_individual_obj[indivial_i, :] = [ 7. 5. 42. 47.]
165 cord_individual_obj[indivial_i, :] = [ 8. 5. 28. 33.]
166 cord_individual_obj[indivial_i, :] = [ 9. 4. 7. 11.]
167 cord_individual_obj[indivial_i, :] = [10. 6. 64. 70.]
168 cord_individual_obj[indivial_i, :] = [11. 5. 57. 62.]
169 cord_individual_obj[indivial_i, :] = [12. 5. 40. 45.]
170 cord_individual_obj[indivial_i, :] = [13. 4. 45. 49.]
171 cord_individual_obj[indivial_i, :] = [14. 4. 51. 55.]
172 cord_individual_obj[indivial_i, :] = [15. 5. 15. 20.]
173 cord_individual_obj[indivial_i, :] = [16. 4. 27. 31.]
174 cord_individual_obj[indivial_i, :] = [17. 4. 24. 28.]
175 cord_individual_obj[indivial_i, :] = [18. 4. 61. 65.]
176 cord_individual_obj[indivial_i, :] = [19. 3. 78. 81.]
177 cord_individual_obj[indivial_i, :] = [20. 4. 57. 61.]
178 cord_individual_obj[indivial_i, :] = [21. 3. 54. 57.]
179 cord_individual_obj[indivial_i, :] = [22. 4. 52. 56.]
180 cord_individual_obj[indivial_i, :] = [23. 5. 81. 86.]
181 cord_individual_obj[indivial_i, :] = [24. 3. 74. 77.]
182
183 min(cord_individual_obj[:, 3]) = 11.0
184 historl_G_best_iter[iter, 3] = 11.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i, :] = [ 0. 7. 32. 39.]
189 cord_individual_obj[indivial_i, :] = [ 1. 4. 28. 32.]
190 cord_individual_obj[indivial_i, :] = [ 2. 4. 58. 62.]
191 cord_individual_obj[indivial_i, :] = [ 3. 5. 17. 22.]
192 cord_individual_obj[indivial_i, :] = [ 4. 4. 15. 19.]
193 cord_individual_obj[indivial_i, :] = [ 5. 4. 41. 45.]
194 cord_individual_obj[indivial_i, :] = [ 6. 5. 47. 52.]
195 cord_individual_obj[indivial_i, :] = [ 7. 6. 34. 40.]
196 cord_individual_obj[indivial_i, :] = [ 8. 6. 43. 49.]
197 cord_individual_obj[indivial_i, :] = [ 9. 5. 42. 47.]
198 cord_individual_obj[indivial_i, :] = [10. 8. 47. 55.]
199 cord_individual_obj[indivial_i, :] = [11. 4. 12. 16.]
200 cord_individual_obj[indivial_i, :] = [12. 6. 39. 45.]
201 cord_individual_obj[indivial_i, :] = [13. 5. 31. 36.]
202 cord_individual_obj[indivial_i, :] = [14. 5. 42. 47.]
203 cord_individual_obj[indivial_i, :] = [15. 5. 32. 37.]
204 cord_individual_obj[indivial_i, :] = [16. 4. 23. 27.]
205 cord_individual_obj[indivial_i, :] = [17. 3. 120. 123.]
206 cord_individual_obj[indivial_i, :] = [18. 5. 26. 31.]
207 cord_individual_obj[indivial_i, :] = [19. 5. 61. 66.]
208 cord_individual_obj[indivial_i, :] = [20. 4. 24. 28.]
209 cord_individual_obj[indivial_i, :] = [21. 5. 46. 51.]
210 cord_individual_obj[indivial_i, :] = [22. 6. 46. 52.]
211 cord_individual_obj[indivial_i, :] = [23. 4. 7. 11.]
212 cord_individual_obj[indivial_i, :] = [24. 4. 25. 29.]
213
214 min(cord_individual_obj[:, 3]) = 11.0
215 historl_G_best_iter[iter, 3] = 11.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i, :] = [ 0. 4. 39. 43.]
220 cord_individual_obj[indivial_i, :] = [ 1. 5. 53. 58.]
221 cord_individual_obj[indivial_i, :] = [ 2. 6. 55. 61.]
222 cord_individual_obj[indivial_i, :] = [ 3. 4. 44. 48.]
223 cord_individual_obj[indivial_i, :] = [ 4. 3. 62. 65.]
224 cord_individual_obj[indivial_i, :] = [ 5. 5. 52. 57.]
225 cord_individual_obj[indivial_i, :] = [ 6. 4. 56. 60.]
226 cord_individual_obj[indivial_i, :] = [ 7. 5. 26. 31.]
227 cord_individual_obj[indivial_i, :] = [ 8. 5. 61. 66.]
228 cord_individual_obj[indivial_i, :] = [ 9. 5. 42. 47.]
229 cord_individual_obj[indivial_i, :] = [10. 5. 72. 77.]
230 cord_individual_obj[indivial_i, :] = [11. 5. 57. 62.]
231 cord_individual_obj[indivial_i, :] = [12. 5. 53. 58.]
232 cord_individual_obj[indivial_i, :] = [13. 3. 66. 69.]
233 cord_individual_obj[indivial_i, :] = [14. 4. 63. 67.]
234 cord_individual_obj[indivial_i, :] = [15. 6. 35. 41.]
235 cord_individual_obj[indivial_i, :] = [16. 4. 41. 45.]
236 cord_individual_obj[indivial_i, :] = [17. 4. 7. 11.]
237 cord_individual_obj[indivial_i, :] = [18. 5. 49. 54.]
238 cord_individual_obj[indivial_i, :] = [19. 3. 50. 53.]
239 cord_individual_obj[indivial_i, :] = [20. 4. 8. 12.]
240 cord_individual_obj[indivial_i, :] = [21. 3. 78. 81.]
241 cord_individual_obj[indivial_i, :] = [22. 5. 17. 22.]
242 cord_individual_obj[indivial_i, :] = [23. 4. 51. 55.]
243 cord_individual_obj[indivial_i, :] = [24. 3. 50. 53.]
244
245 min(cord_individual_obj[:, 3]) = 11.0
246 historl_G_best_iter[iter, 3] = 11.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0.  6. 29. 35.]
251 cord_individual_obj[indivial_i, :] = [ 1.  4. 33. 37.]
252 cord_individual_obj[indivial_i, :] = [ 2.  4. 44. 48.]
253 cord_individual_obj[indivial_i, :] = [ 3.  5. 51. 56.]
254 cord_individual_obj[indivial_i, :] = [ 4.  4. 46. 50.]
255 cord_individual_obj[indivial_i, :] = [ 5.  3. 27. 30.]
256 cord_individual_obj[indivial_i, :] = [ 6.  7. 50. 57.]
257 cord_individual_obj[indivial_i, :] = [ 7.  6. 32. 38.]
258 cord_individual_obj[indivial_i, :] = [ 8.  4. 73. 77.]
259 cord_individual_obj[indivial_i, :] = [ 9.  5. 33. 38.]
260 cord_individual_obj[indivial_i, :] = [10.  6. 20. 26.]
261 cord_individual_obj[indivial_i, :] = [11.  4. 15. 19.]
262 cord_individual_obj[indivial_i, :] = [12.  5. 40. 45.]
263 cord_individual_obj[indivial_i, :] = [13.  5. 59. 64.]
264 cord_individual_obj[indivial_i, :] = [14.  4. 47. 51.]
265 cord_individual_obj[indivial_i, :] = [15.  5. 47. 52.]
266 cord_individual_obj[indivial_i, :] = [16.  3. 71. 74.]
267 cord_individual_obj[indivial_i, :] = [17.  4. 45. 49.]
268 cord_individual_obj[indivial_i, :] = [18.  4. 36. 40.]
269 cord_individual_obj[indivial_i, :] = [19.  4. 75. 79.]
270 cord_individual_obj[indivial_i, :] = [20.  3. 37. 40.]
271 cord_individual_obj[indivial_i, :] = [21.  4. 7. 11.]
272 cord_individual_obj[indivial_i, :] = [22.  5. 36. 41.]
273 cord_individual_obj[indivial_i, :] = [23.  4. 45. 49.]
274 cord_individual_obj[indivial_i, :] = [24.  4. 27. 31.]
275

276 min(cord_individual_obj[:, 3]) = 11.0
277 historl_G_best_iter[iter, 3] = 11.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0.  4. 24. 28.]
282 cord_individual_obj[indivial_i, :] = [ 1.  4. 59. 63.]
283 cord_individual_obj[indivial_i, :] = [ 2.  5. 169. 174.]
284 cord_individual_obj[indivial_i, :] = [ 3.  7. 47. 54.]
285 cord_individual_obj[indivial_i, :] = [ 4.  4. 54. 58.]
286 cord_individual_obj[indivial_i, :] = [ 5.  4. 118. 122.]
287 cord_individual_obj[indivial_i, :] = [ 6.  4. 54. 58.]
288 cord_individual_obj[indivial_i, :] = [ 7.  6. 30. 36.]
289 cord_individual_obj[indivial_i, :] = [ 8.  7. 17. 24.]
290 cord_individual_obj[indivial_i, :] = [ 9.  5. 15. 20.]
291 cord_individual_obj[indivial_i, :] = [10.  5. 104. 109.]
292 cord_individual_obj[indivial_i, :] = [11.  5. 11. 16.]
293 cord_individual_obj[indivial_i, :] = [12.  4. 41. 45.]
294 cord_individual_obj[indivial_i, :] = [13.  5. 70. 75.]
295 cord_individual_obj[indivial_i, :] = [14.  5. 93. 98.]
296 cord_individual_obj[indivial_i, :] = [15.  6. 93. 99.]
297 cord_individual_obj[indivial_i, :] = [16.  7. 26. 33.]
298 cord_individual_obj[indivial_i, :] = [17.  5. 38. 43.]
299 cord_individual_obj[indivial_i, :] = [18.  6. 52. 58.]
300 cord_individual_obj[indivial_i, :] = [19.  4. 7. 11.]
301 cord_individual_obj[indivial_i, :] = [20.  4. 97. 101.]
302 cord_individual_obj[indivial_i, :] = [21.  3. 84. 87.]
303 cord_individual_obj[indivial_i, :] = [22.  7. 71. 78.]
304 cord_individual_obj[indivial_i, :] = [23.  5. 48. 53.]
305 cord_individual_obj[indivial_i, :] = [24.  5. 26. 31.]
306

307 min(cord_individual_obj[:, 3]) = 11.0
308 historl_G_best_iter[iter, 3] = 11.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0.  7. 28. 35.]
313 cord_individual_obj[indivial_i, :] = [ 1.  5. 90. 95.]
314 cord_individual_obj[indivial_i, :] = [ 2.  4. 7. 11.]
315 cord_individual_obj[indivial_i, :] = [ 3.  5. 52. 57.]
316 cord_individual_obj[indivial_i, :] = [ 4.  5. 45. 50.]
317 cord_individual_obj[indivial_i, :] = [ 5.  4. 39. 43.]
318 cord_individual_obj[indivial_i, :] = [ 6.  5. 18. 23.]
319 cord_individual_obj[indivial_i, :] = [ 7.  6. 25. 31.]
320 cord_individual_obj[indivial_i, :] = [ 8.  7. 12. 19.]
321 cord_individual_obj[indivial_i, :] = [ 9.  8. 108. 116.]
322 cord_individual_obj[indivial_i, :] = [10.  6. 34. 40.]
323 cord_individual_obj[indivial_i, :] = [11.  5. 38. 43.]
324 cord_individual_obj[indivial_i, :] = [12.  7. 13. 20.]
325 cord_individual_obj[indivial_i, :] = [13.  5. 20. 25.]
326 cord_individual_obj[indivial_i, :] = [14.  4. 23. 27.]
327 cord_individual_obj[indivial_i, :] = [15.  5. 54. 59.]
328 cord_individual_obj[indivial_i, :] = [16.  4. 39. 43.]
329 cord_individual_obj[indivial_i, :] = [17.  5. 38. 43.]
330 cord_individual_obj[indivial_i, :] = [18.  6. 66. 72.]
331 cord_individual_obj[indivial_i, :] = [19.  3. 72. 75.]

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332 cord_individual_obj[indivial_i, :] = [20. 5. 66. 71.]
333 cord_individual_obj[indivial_i, :] = [21. 5. 68. 73.]
334 cord_individual_obj[indivial_i, :] = [22. 4. 111. 115.]
335 cord_individual_obj[indivial_i, :] = [23. 5. 46. 51.]
336 cord_individual_obj[indivial_i, :] = [24. 4. 50. 54.]
337
338 min(cord_individual_obj[:, 3]) = 11.0
339 histol_G_best_iter[iter, 3] = 11.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i, :] = [ 0. 5. 23. 28.]
344 cord_individual_obj[indivial_i, :] = [ 1. 4. 10. 14.]
345 cord_individual_obj[indivial_i, :] = [ 2. 4. 59. 63.]
346 cord_individual_obj[indivial_i, :] = [ 3. 5. 45. 50.]
347 cord_individual_obj[indivial_i, :] = [ 4. 4. 66. 70.]
348 cord_individual_obj[indivial_i, :] = [ 5. 5. 71. 76.]
349 cord_individual_obj[indivial_i, :] = [ 6. 4. 60. 64.]
350 cord_individual_obj[indivial_i, :] = [ 7. 5. 26. 31.]
351 cord_individual_obj[indivial_i, :] = [ 8. 5. 29. 34.]
352 cord_individual_obj[indivial_i, :] = [ 9. 4. 7. 11.]
353 cord_individual_obj[indivial_i, :] = [10. 4. 60. 64.]
354 cord_individual_obj[indivial_i, :] = [11. 5. 11. 16.]
355 cord_individual_obj[indivial_i, :] = [12. 4. 41. 45.]
356 cord_individual_obj[indivial_i, :] = [13. 4. 62. 66.]
357 cord_individual_obj[indivial_i, :] = [14. 4. 63. 67.]
358 cord_individual_obj[indivial_i, :] = [15. 5. 15. 20.]
359 cord_individual_obj[indivial_i, :] = [16. 5. 9. 14.]
360 cord_individual_obj[indivial_i, :] = [17. 4. 38. 42.]
361 cord_individual_obj[indivial_i, :] = [18. 4. 45. 49.]
362 cord_individual_obj[indivial_i, :] = [19. 3. 104. 107.]
363 cord_individual_obj[indivial_i, :] = [20. 4. 81. 85.]
364 cord_individual_obj[indivial_i, :] = [21. 4. 72. 76.]
365 cord_individual_obj[indivial_i, :] = [22. 6. 90. 96.]
366 cord_individual_obj[indivial_i, :] = [23. 5. 48. 53.]
367 cord_individual_obj[indivial_i, :] = [24. 4. 27. 31.]
368
369 min(cord_individual_obj[:, 3]) = 11.0
370 histol_G_best_iter[iter, 3] = 11.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i, :] = [ 0. 5. 20. 25.]
375 cord_individual_obj[indivial_i, :] = [ 1. 5. 9. 14.]
376 cord_individual_obj[indivial_i, :] = [ 2. 5. 86. 91.]
377 cord_individual_obj[indivial_i, :] = [ 3. 5. 29. 34.]
378 cord_individual_obj[indivial_i, :] = [ 4. 7. 12. 19.]
379 cord_individual_obj[indivial_i, :] = [ 5. 4. 61. 65.]
380 cord_individual_obj[indivial_i, :] = [ 6. 5. 23. 28.]
381 cord_individual_obj[indivial_i, :] = [ 7. 6. 44. 50.]
382 cord_individual_obj[indivial_i, :] = [ 8. 4. 57. 61.]
383 cord_individual_obj[indivial_i, :] = [ 9. 5. 42. 47.]
384 cord_individual_obj[indivial_i, :] = [10. 6. 18. 24.]
385 cord_individual_obj[indivial_i, :] = [11. 5. 21. 26.]
386 cord_individual_obj[indivial_i, :] = [12. 5. 41. 46.]
387 cord_individual_obj[indivial_i, :] = [13. 7. 29. 36.]
388 cord_individual_obj[indivial_i, :] = [14. 4. 63. 67.]
389 cord_individual_obj[indivial_i, :] = [15. 4. 13. 17.]
390 cord_individual_obj[indivial_i, :] = [16. 5. 11. 16.]
391 cord_individual_obj[indivial_i, :] = [17. 4. 26. 30.]
392 cord_individual_obj[indivial_i, :] = [18. 3. 78. 81.]
393 cord_individual_obj[indivial_i, :] = [19. 4. 7. 11.]
394 cord_individual_obj[indivial_i, :] = [20. 5. 41. 46.]
395 cord_individual_obj[indivial_i, :] = [21. 3. 77. 80.]
396 cord_individual_obj[indivial_i, :] = [22. 6. 91. 97.]
397 cord_individual_obj[indivial_i, :] = [23. 4. 63. 67.]
398 cord_individual_obj[indivial_i, :] = [24. 3. 27. 30.]
399
400 min(cord_individual_obj[:, 3]) = 11.0
401 histol_G_best_iter[iter, 3] = 11.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i, :] = [ 0. 5. 11. 16.]
406 cord_individual_obj[indivial_i, :] = [ 1. 5. 30. 35.]
407 cord_individual_obj[indivial_i, :] = [ 2. 5. 58. 63.]
408 cord_individual_obj[indivial_i, :] = [ 3. 4. 43. 47.]
409 cord_individual_obj[indivial_i, :] = [ 4. 4. 80. 84.]
410 cord_individual_obj[indivial_i, :] = [ 5. 5. 69. 74.]
411 cord_individual_obj[indivial_i, :] = [ 6. 4. 50. 54.]
412 cord_individual_obj[indivial_i, :] = [ 7. 5. 26. 31.]
413 cord_individual_obj[indivial_i, :] = [ 8. 4. 35. 39.]
414 cord_individual_obj[indivial_i, :] = [ 9. 5. 40. 45.]
415 cord_individual_obj[indivial_i, :] = [10. 4. 75. 79.]

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416 cord_individual_obj[indivial_i,:] = [11. 5. 57. 62.]
417 cord_individual_obj[indivial_i,:] = [12. 7. 65. 72.]
418 cord_individual_obj[indivial_i,:] = [13. 4. 61. 65.]
419 cord_individual_obj[indivial_i,:] = [14. 4. 56. 60.]
420 cord_individual_obj[indivial_i,:] = [15. 4. 15. 19.]
421 cord_individual_obj[indivial_i,:] = [16. 4. 8. 12.]
422 cord_individual_obj[indivial_i,:] = [17. 3. 106. 109.]
423 cord_individual_obj[indivial_i,:] = [18. 4. 61. 65.]
424 cord_individual_obj[indivial_i,:] = [19. 3. 72. 75.]
425 cord_individual_obj[indivial_i,:] = [20. 4. 92. 96.]
426 cord_individual_obj[indivial_i,:] = [21. 4. 51. 55.]
427 cord_individual_obj[indivial_i,:] = [22. 4. 7. 11.]
428 cord_individual_obj[indivial_i,:] = [23. 4. 62. 66.]
429 cord_individual_obj[indivial_i,:] = [24. 4. 73. 77.]
430
431 min(cord_individual_obj[:,3]) = 11.0
432 histol_G_best_iter[iter,3] = 11.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 5. 41. 46.]
437 cord_individual_obj[indivial_i,:] = [ 1. 5. 30. 35.]
438 cord_individual_obj[indivial_i,:] = [ 2. 4. 59. 63.]
439 cord_individual_obj[indivial_i,:] = [ 3. 5. 63. 68.]
440 cord_individual_obj[indivial_i,:] = [ 4. 3. 80. 83.]
441 cord_individual_obj[indivial_i,:] = [ 5. 4. 47. 51.]
442 cord_individual_obj[indivial_i,:] = [ 6. 3. 60. 63.]
443 cord_individual_obj[indivial_i,:] = [ 7. 5. 69. 74.]
444 cord_individual_obj[indivial_i,:] = [ 8. 4. 74. 78.]
445 cord_individual_obj[indivial_i,:] = [ 9. 5. 42. 47.]
446 cord_individual_obj[indivial_i,:] = [10. 5. 61. 66.]
447 cord_individual_obj[indivial_i,:] = [11. 6. 11. 17.]
448 cord_individual_obj[indivial_i,:] = [12. 4. 40. 44.]
449 cord_individual_obj[indivial_i,:] = [13. 4. 55. 59.]
450 cord_individual_obj[indivial_i,:] = [14. 4. 56. 60.]
451 cord_individual_obj[indivial_i,:] = [15. 5. 15. 20.]
452 cord_individual_obj[indivial_i,:] = [16. 4. 43. 47.]
453 cord_individual_obj[indivial_i,:] = [17. 4. 7. 11.]
454 cord_individual_obj[indivial_i,:] = [18. 5. 49. 54.]
455 cord_individual_obj[indivial_i,:] = [19. 4. 80. 84.]
456 cord_individual_obj[indivial_i,:] = [20. 5. 61. 66.]
457 cord_individual_obj[indivial_i,:] = [21. 3. 84. 87.]
458 cord_individual_obj[indivial_i,:] = [22. 4. 52. 56.]
459 cord_individual_obj[indivial_i,:] = [23. 5. 65. 70.]
460 cord_individual_obj[indivial_i,:] = [24. 4. 54. 58.]
461
462 min(cord_individual_obj[:,3]) = 11.0
463 histol_G_best_iter[iter,3] = 11.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 5. 25. 30.]
468 cord_individual_obj[indivial_i,:] = [ 1. 4. 28. 32.]
469 cord_individual_obj[indivial_i,:] = [ 2. 5. 58. 63.]
470 cord_individual_obj[indivial_i,:] = [ 3. 4. 61. 65.]
471 cord_individual_obj[indivial_i,:] = [ 4. 4. 80. 84.]
472 cord_individual_obj[indivial_i,:] = [ 5. 5. 69. 74.]
473 cord_individual_obj[indivial_i,:] = [ 6. 4. 27. 31.]
474 cord_individual_obj[indivial_i,:] = [ 7. 5. 62. 67.]
475 cord_individual_obj[indivial_i,:] = [ 8. 5. 49. 54.]
476 cord_individual_obj[indivial_i,:] = [ 9. 5. 42. 47.]
477 cord_individual_obj[indivial_i,:] = [10. 4. 75. 79.]
478 cord_individual_obj[indivial_i,:] = [11. 5. 57. 62.]
479 cord_individual_obj[indivial_i,:] = [12. 5. 40. 45.]
480 cord_individual_obj[indivial_i,:] = [13. 3. 39. 42.]
481 cord_individual_obj[indivial_i,:] = [14. 4. 56. 60.]
482 cord_individual_obj[indivial_i,:] = [15. 5. 36. 41.]
483 cord_individual_obj[indivial_i,:] = [16. 5. 8. 13.]
484 cord_individual_obj[indivial_i,:] = [17. 4. 45. 49.]
485 cord_individual_obj[indivial_i,:] = [18. 4. 43. 47.]
486 cord_individual_obj[indivial_i,:] = [19. 3. 50. 53.]
487 cord_individual_obj[indivial_i,:] = [20. 4. 95. 99.]
488 cord_individual_obj[indivial_i,:] = [21. 4. 7. 11.]
489 cord_individual_obj[indivial_i,:] = [22. 4. 52. 56.]
490 cord_individual_obj[indivial_i,:] = [23. 4. 34. 38.]
491 cord_individual_obj[indivial_i,:] = [24. 3. 51. 54.]
492
493 min(cord_individual_obj[:,3]) = 11.0
494 histol_G_best_iter[iter,3] = 11.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 7. 13. 20.]
499 cord_individual_obj[indivial_i,:] = [ 1. 4. 31. 35.]

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500 cord_individual_obj[indivial_i, :] = [ 2. 5. 119. 124.]
501 cord_individual_obj[indivial_i, :] = [ 3. 5. 30. 35.]
502 cord_individual_obj[indivial_i, :] = [ 4. 7. 12. 19.]
503 cord_individual_obj[indivial_i, :] = [ 5. 4. 121. 125.]
504 cord_individual_obj[indivial_i, :] = [ 6. 5. 40. 45.]
505 cord_individual_obj[indivial_i, :] = [ 7. 6. 44. 50.]
506 cord_individual_obj[indivial_i, :] = [ 8. 3. 73. 76.]
507 cord_individual_obj[indivial_i, :] = [ 9. 5. 34. 39.]
508 cord_individual_obj[indivial_i, :] = [10. 7. 18. 25.]
509 cord_individual_obj[indivial_i, :] = [11. 5. 23. 28.]
510 cord_individual_obj[indivial_i, :] = [12. 7. 53. 60.]
511 cord_individual_obj[indivial_i, :] = [13. 6. 21. 27.]
512 cord_individual_obj[indivial_i, :] = [14. 5. 64. 69.]
513 cord_individual_obj[indivial_i, :] = [15. 7. 29. 36.]
514 cord_individual_obj[indivial_i, :] = [16. 7. 60. 67.]
515 cord_individual_obj[indivial_i, :] = [17. 5. 47. 52.]
516 cord_individual_obj[indivial_i, :] = [18. 4. 68. 72.]
517 cord_individual_obj[indivial_i, :] = [19. 3. 82. 85.]
518 cord_individual_obj[indivial_i, :] = [20. 4. 7. 11.]
519 cord_individual_obj[indivial_i, :] = [21. 3. 84. 87.]
520 cord_individual_obj[indivial_i, :] = [22. 6. 53. 59.]
521 cord_individual_obj[indivial_i, :] = [23. 4. 55. 59.]
522 cord_individual_obj[indivial_i, :] = [24. 4. 75. 79.]
523
524 min(cord_individual_obj[:, 3]) = 11.0
525 histol_G_best_iter[iter, 3] = 11.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i, :] = [ 0. 5. 36. 41.]
530 cord_individual_obj[indivial_i, :] = [ 1. 5. 71. 76.]
531 cord_individual_obj[indivial_i, :] = [ 2. 5. 139. 144.]
532 cord_individual_obj[indivial_i, :] = [ 3. 5. 10. 15.]
533 cord_individual_obj[indivial_i, :] = [ 4. 4. 60. 64.]
534 cord_individual_obj[indivial_i, :] = [ 5. 4. 7. 11.]
535 cord_individual_obj[indivial_i, :] = [ 6. 3. 30. 33.]
536 cord_individual_obj[indivial_i, :] = [ 7. 5. 34. 39.]
537 cord_individual_obj[indivial_i, :] = [ 8. 5. 52. 57.]
538 cord_individual_obj[indivial_i, :] = [ 9. 6. 36. 42.]
539 cord_individual_obj[indivial_i, :] = [10. 6. 16. 22.]
540 cord_individual_obj[indivial_i, :] = [11. 5. 23. 28.]
541 cord_individual_obj[indivial_i, :] = [12. 6. 48. 54.]
542 cord_individual_obj[indivial_i, :] = [13. 5. 43. 48.]
543 cord_individual_obj[indivial_i, :] = [14. 4. 55. 59.]
544 cord_individual_obj[indivial_i, :] = [15. 5. 92. 97.]
545 cord_individual_obj[indivial_i, :] = [16. 5. 9. 14.]
546 cord_individual_obj[indivial_i, :] = [17. 4. 14. 18.]
547 cord_individual_obj[indivial_i, :] = [18. 4. 34. 38.]
548 cord_individual_obj[indivial_i, :] = [19. 3. 72. 75.]
549 cord_individual_obj[indivial_i, :] = [20. 5. 96. 101.]
550 cord_individual_obj[indivial_i, :] = [21. 4. 44. 48.]
551 cord_individual_obj[indivial_i, :] = [22. 6. 67. 73.]
552 cord_individual_obj[indivial_i, :] = [23. 3. 64. 67.]
553 cord_individual_obj[indivial_i, :] = [24. 4. 50. 54.]
554
555 min(cord_individual_obj[:, 3]) = 11.0
556 histol_G_best_iter[iter, 3] = 11.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i, :] = [ 0. 5. 34. 39.]
561 cord_individual_obj[indivial_i, :] = [ 1. 5. 9. 14.]
562 cord_individual_obj[indivial_i, :] = [ 2. 4. 7. 11.]
563 cord_individual_obj[indivial_i, :] = [ 3. 4. 31. 35.]
564 cord_individual_obj[indivial_i, :] = [ 4. 7. 61. 68.]
565 cord_individual_obj[indivial_i, :] = [ 5. 5. 69. 74.]
566 cord_individual_obj[indivial_i, :] = [ 6. 6. 18. 24.]
567 cord_individual_obj[indivial_i, :] = [ 7. 5. 58. 63.]
568 cord_individual_obj[indivial_i, :] = [ 8. 5. 55. 60.]
569 cord_individual_obj[indivial_i, :] = [ 9. 6. 117. 123.]
570 cord_individual_obj[indivial_i, :] = [10. 6. 83. 89.]
571 cord_individual_obj[indivial_i, :] = [11. 6. 11. 17.]
572 cord_individual_obj[indivial_i, :] = [12. 4. 39. 43.]
573 cord_individual_obj[indivial_i, :] = [13. 5. 17. 22.]
574 cord_individual_obj[indivial_i, :] = [14. 5. 58. 63.]
575 cord_individual_obj[indivial_i, :] = [15. 5. 72. 77.]
576 cord_individual_obj[indivial_i, :] = [16. 4. 40. 44.]
577 cord_individual_obj[indivial_i, :] = [17. 5. 40. 45.]
578 cord_individual_obj[indivial_i, :] = [18. 7. 21. 28.]
579 cord_individual_obj[indivial_i, :] = [19. 5. 11. 16.]
580 cord_individual_obj[indivial_i, :] = [20. 5. 73. 78.]
581 cord_individual_obj[indivial_i, :] = [21. 4. 113. 117.]
582 cord_individual_obj[indivial_i, :] = [22. 4. 40. 44.]
583 cord_individual_obj[indivial_i, :] = [23. 5. 47. 52.]

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unknown

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584     cord_individual_obj[indivial_i, :] = [24. 4. 37. 41.]  
585  
586     min(cord_individual_obj[:, 3]) = 11.0  
587     historl_G_best_iter[iter, 3] = 11.0  
588 Begin iteration:  
589  
590 iter = 18  
591     cord_individual_obj[indivial_i, :] = [ 0. 5. 13. 18.]  
592     cord_individual_obj[indivial_i, :] = [ 1. 3. 55. 58.]  
593     cord_individual_obj[indivial_i, :] = [ 2. 5. 76. 81.]  
594     cord_individual_obj[indivial_i, :] = [ 3. 7. 18. 25.]  
595     cord_individual_obj[indivial_i, :] = [ 4. 5. 46. 51.]  
596     cord_individual_obj[indivial_i, :] = [ 5. 4. 40. 44.]  
597     cord_individual_obj[indivial_i, :] = [ 6. 6. 15. 21.]  
598     cord_individual_obj[indivial_i, :] = [ 7. 6. 34. 40.]  
599     cord_individual_obj[indivial_i, :] = [ 8. 6. 13. 19.]  
600     cord_individual_obj[indivial_i, :] = [ 9. 4. 7. 11.]  
601     cord_individual_obj[indivial_i, :] = [10. 6. 14. 20.]  
602     cord_individual_obj[indivial_i, :] = [11. 5. 17. 22.]  
603     cord_individual_obj[indivial_i, :] = [12. 5. 38. 43.]  
604     cord_individual_obj[indivial_i, :] = [13. 5. 40. 45.]  
605     cord_individual_obj[indivial_i, :] = [14. 4. 62. 66.]  
606     cord_individual_obj[indivial_i, :] = [15. 5. 37. 42.]  
607     cord_individual_obj[indivial_i, :] = [16. 6. 38. 44.]  
608     cord_individual_obj[indivial_i, :] = [17. 4. 8. 12.]  
609     cord_individual_obj[indivial_i, :] = [18. 4. 58. 62.]  
610     cord_individual_obj[indivial_i, :] = [19. 4. 83. 87.]  
611     cord_individual_obj[indivial_i, :] = [20. 4. 12. 16.]  
612     cord_individual_obj[indivial_i, :] = [21. 5. 62. 67.]  
613     cord_individual_obj[indivial_i, :] = [22. 7. 44. 51.]  
614     cord_individual_obj[indivial_i, :] = [23. 5. 45. 50.]  
615     cord_individual_obj[indivial_i, :] = [24. 5. 58. 63.]  
616  
617     min(cord_individual_obj[:, 3]) = 11.0  
618     historl_G_best_iter[iter, 3] = 11.0  
619 Begin iteration:  
620  
621 iter = 19  
622     cord_individual_obj[indivial_i, :] = [ 0. 4. 76. 80.]  
623     cord_individual_obj[indivial_i, :] = [ 1. 5. 88. 93.]  
624     cord_individual_obj[indivial_i, :] = [ 2. 4. 54. 58.]  
625     cord_individual_obj[indivial_i, :] = [ 3. 4. 43. 47.]  
626     cord_individual_obj[indivial_i, :] = [ 4. 5. 116. 121.]  
627     cord_individual_obj[indivial_i, :] = [ 5. 5. 52. 57.]  
628     cord_individual_obj[indivial_i, :] = [ 6. 5. 27. 32.]  
629     cord_individual_obj[indivial_i, :] = [ 7. 5. 81. 86.]  
630     cord_individual_obj[indivial_i, :] = [ 8. 7. 79. 86.]  
631     cord_individual_obj[indivial_i, :] = [ 9. 5. 42. 47.]  
632     cord_individual_obj[indivial_i, :] = [10. 6. 64. 70.]  
633     cord_individual_obj[indivial_i, :] = [11. 5. 63. 68.]  
634     cord_individual_obj[indivial_i, :] = [12. 5. 54. 59.]  
635     cord_individual_obj[indivial_i, :] = [13. 3. 68. 71.]  
636     cord_individual_obj[indivial_i, :] = [14. 6. 17. 23.]  
637     cord_individual_obj[indivial_i, :] = [15. 5. 24. 29.]  
638     cord_individual_obj[indivial_i, :] = [16. 4. 37. 41.]  
639     cord_individual_obj[indivial_i, :] = [17. 3. 52. 55.]  
640     cord_individual_obj[indivial_i, :] = [18. 4. 36. 40.]  
641     cord_individual_obj[indivial_i, :] = [19. 4. 7. 11.]  
642     cord_individual_obj[indivial_i, :] = [20. 4. 8. 12.]  
643     cord_individual_obj[indivial_i, :] = [21. 4. 51. 55.]  
644     cord_individual_obj[indivial_i, :] = [22. 5. 17. 22.]  
645     cord_individual_obj[indivial_i, :] = [23. 4. 52. 56.]  
646     cord_individual_obj[indivial_i, :] = [24. 3. 50. 53.]  
647  
648     min(cord_individual_obj[:, 3]) = 11.0  
649     historl_G_best_iter[iter, 3] = 11.0  
650 Begin iteration:  
651  
652 iter = 20  
653     cord_individual_obj[indivial_i, :] = [ 0. 7. 15. 22.]  
654     cord_individual_obj[indivial_i, :] = [ 1. 4. 34. 38.]  
655     cord_individual_obj[indivial_i, :] = [ 2. 5. 79. 84.]  
656     cord_individual_obj[indivial_i, :] = [ 3. 5. 16. 21.]  
657     cord_individual_obj[indivial_i, :] = [ 4. 4. 7. 11.]  
658     cord_individual_obj[indivial_i, :] = [ 5. 3. 13. 16.]  
659     cord_individual_obj[indivial_i, :] = [ 6. 3. 42. 45.]  
660     cord_individual_obj[indivial_i, :] = [ 7. 5. 32. 37.]  
661     cord_individual_obj[indivial_i, :] = [ 8. 6. 23. 29.]  
662     cord_individual_obj[indivial_i, :] = [ 9. 5. 29. 34.]  
663     cord_individual_obj[indivial_i, :] = [10. 6. 12. 18.]  
664     cord_individual_obj[indivial_i, :] = [11. 5. 14. 19.]  
665     cord_individual_obj[indivial_i, :] = [12. 5. 24. 29.]  
666     cord_individual_obj[indivial_i, :] = [13. 4. 25. 29.]  
667     cord_individual_obj[indivial_i, :] = [14. 6. 94. 100.]
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668 cord_individual_obj[indivial_i, :] = [15. 5. 16. 21.]
669 cord_individual_obj[indivial_i, :] = [16. 5. 109. 114.]
670 cord_individual_obj[indivial_i, :] = [17. 6. 28. 34.]
671 cord_individual_obj[indivial_i, :] = [18. 6. 24. 30.]
672 cord_individual_obj[indivial_i, :] = [19. 4. 80. 84.]
673 cord_individual_obj[indivial_i, :] = [20. 4. 48. 52.]
674 cord_individual_obj[indivial_i, :] = [21. 3. 55. 58.]
675 cord_individual_obj[indivial_i, :] = [22. 5. 65. 70.]
676 cord_individual_obj[indivial_i, :] = [23. 4. 64. 68.]
677 cord_individual_obj[indivial_i, :] = [24. 5. 20. 25.]
678
679 min(cord_individual_obj[:, 3]) = 11.0
680 historl_G_best_iter[iter, 3] = 11.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 112.0
689 Proportion_of_area = 0.1037037037037037
690 BEST_CHROM =
691 berth: [ 7.5 18. 12.5 6.5 24.5 1.5 25. 16. ]
692 time: [3. 0. 0. 0. 2. 0. 0. 2.]
693 num_QC: [3. 4. 4. 2. 2. 2. 2. 7.]
694 Objective function values and some other indicators:
695 Obj0 = 4.00 Obj1 = 7.00 Obj0 + Obj1 = 11.00
696 Total movement of crane: 0.00
697 Total waiting time in berth position: 7.00
698 Total index of q during berthing: 504.00
699 Specific arrangement for each vessel:
700 V_id: 0 li: 9.0 xi: 7.5 bow of i: 3.0 tail of i: 12.0 gama_i0: 3.0 gama_i1: 4.0
701 .0 gama_i1 + 1: 5.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 120.0 work_load_i:
702 V_id: 1 li: 6.0 xi: 18.0 bow of i: 15.0 tail of i: 21.0 gama_i0: 0.0 gama_i1: 1
703 .0 gama_i1 + 1: 2.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 140.0 work
704 V_id: 2 li: 5.0 xi: 12.5 bow of i: 10.0 tail of i: 15.0 gama_i0: 0.0 gama_i1: 1
705 .0 gama_i1 + 1: 2.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 100.0 work
706 V_id: 3 li: 7.0 xi: 6.5 bow of i: 3.0 tail of i: 10.0 gama_i0: 0.0 gama_i1: 2.0
707 .0 gama_i1 + 1: 3.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 100.0 work_load_i:
708 V_id: 4 li: 7.0 xi: 24.5 bow of i: 21.0 tail of i: 28.0 gama_i0: 2.0 gama_i1: 3
709 .0 gama_i1 + 1: 4.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 80.0 work
710 V_id: 5 li: 3.0 xi: 1.5 bow of i: 0.0 tail of i: 3.0 gama_i0: 0.0 gama_i1: 3.0
711 .0 gama_i1 + 1: 4.0 gama_i1 - gama_i0: 3.0 duration_time_i: 4.0 demand_i: 160.0 work_load_i:
712 V_id: 6 li: 8.0 xi: 25.0 bow of i: 21.0 tail of i: 29.0 gama_i0: 0.0 gama_i1: 1
713 .0 gama_i1 + 1: 2.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 80.0 work
714 V_id: 7 li: 8.0 xi: 16.0 bow of i: 12.0 tail of i: 20.0 gama_i0: 2.0 gama_i1: 3
715 .0 gama_i1 + 1: 4.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 160.0 work
716
717 Algorithm finished and the total CPU time: 229 s
718 End
719

```