

unknown

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80 cord_individual_obj[indivial_i,:] = [16. 4. 2. 6.]
81 cord_individual_obj[indivial_i,:] = [17. 4. 2. 6.]
82 cord_individual_obj[indivial_i,:] = [18. 6. 5. 11.]
83 cord_individual_obj[indivial_i,:] = [19. 3. 20. 23.]
84 cord_individual_obj[indivial_i,:] = [20. 5. 13. 18.]
85 cord_individual_obj[indivial_i,:] = [21. 5. 16. 21.]
86 cord_individual_obj[indivial_i,:] = [22. 5. 13. 18.]
87 cord_individual_obj[indivial_i,:] = [23. 5. 13. 18.]
88 cord_individual_obj[indivial_i,:] = [24. 5. 6. 11.]
89
90 min(cord_individual_obj[:,3]) = 6.0
91 historl_G_best_iter[iter,3] = 6.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [0. 5. 1. 6.]
96 cord_individual_obj[indivial_i,:] = [1. 5. 14. 19.]
97 cord_individual_obj[indivial_i,:] = [2. 4. 2. 6.]
98 cord_individual_obj[indivial_i,:] = [3. 5. 12. 17.]
99 cord_individual_obj[indivial_i,:] = [4. 4. 27. 31.]
100 cord_individual_obj[indivial_i,:] = [5. 4. 1. 5.]
101 cord_individual_obj[indivial_i,:] = [6. 3. 14. 17.]
102 cord_individual_obj[indivial_i,:] = [7. 5. 2. 7.]
103 cord_individual_obj[indivial_i,:] = [8. 5. 1. 6.]
104 cord_individual_obj[indivial_i,:] = [9. 5. 17. 22.]
105 cord_individual_obj[indivial_i,:] = [10. 5. 34. 39.]
106 cord_individual_obj[indivial_i,:] = [11. 4. 2. 6.]
107 cord_individual_obj[indivial_i,:] = [12. 5. 12. 17.]
108 cord_individual_obj[indivial_i,:] = [13. 5. 2. 7.]
109 cord_individual_obj[indivial_i,:] = [14. 5. 7. 12.]
110 cord_individual_obj[indivial_i,:] = [15. 5. 14. 19.]
111 cord_individual_obj[indivial_i,:] = [16. 5. 21. 26.]
112 cord_individual_obj[indivial_i,:] = [17. 5. 3. 8.]
113 cord_individual_obj[indivial_i,:] = [18. 5. 2. 7.]
114 cord_individual_obj[indivial_i,:] = [19. 4. 3. 7.]
115 cord_individual_obj[indivial_i,:] = [20. 5. 13. 18.]
116 cord_individual_obj[indivial_i,:] = [21. 5. 5. 10.]
117 cord_individual_obj[indivial_i,:] = [22. 3. 38. 41.]
118 cord_individual_obj[indivial_i,:] = [23. 5. 6. 11.]
119 cord_individual_obj[indivial_i,:] = [24. 4. 14. 18.]
120
121 min(cord_individual_obj[:,3]) = 5.0
122 historl_G_best_iter[iter,3] = 5.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [0. 5. 4. 9.]
127 cord_individual_obj[indivial_i,:] = [1. 6. 2. 8.]
128 cord_individual_obj[indivial_i,:] = [2. 4. 4. 8.]
129 cord_individual_obj[indivial_i,:] = [3. 4. 12. 16.]
130 cord_individual_obj[indivial_i,:] = [4. 6. 2. 8.]
131 cord_individual_obj[indivial_i,:] = [5. 5. 14. 19.]
132 cord_individual_obj[indivial_i,:] = [6. 5. 6. 11.]
133 cord_individual_obj[indivial_i,:] = [7. 4. 14. 18.]
134 cord_individual_obj[indivial_i,:] = [8. 3. 2. 5.]
135 cord_individual_obj[indivial_i,:] = [9. 4. 19. 23.]
136 cord_individual_obj[indivial_i,:] = [10. 5. 13. 18.]
137 cord_individual_obj[indivial_i,:] = [11. 7. 3. 10.]
138 cord_individual_obj[indivial_i,:] = [12. 4. 1. 5.]
139 cord_individual_obj[indivial_i,:] = [13. 4. 3. 7.]
140 cord_individual_obj[indivial_i,:] = [14. 5. 6. 11.]
141 cord_individual_obj[indivial_i,:] = [15. 3. 18. 21.]
142 cord_individual_obj[indivial_i,:] = [16. 5. 2. 7.]
143 cord_individual_obj[indivial_i,:] = [17. 4. 4. 8.]
144 cord_individual_obj[indivial_i,:] = [18. 6. 5. 11.]
145 cord_individual_obj[indivial_i,:] = [19. 5. 14. 19.]
146 cord_individual_obj[indivial_i,:] = [20. 3. 19. 22.]
147 cord_individual_obj[indivial_i,:] = [21. 4. 13. 17.]
148 cord_individual_obj[indivial_i,:] = [22. 4. 1. 5.]
149 cord_individual_obj[indivial_i,:] = [23. 5. 19. 24.]
150 cord_individual_obj[indivial_i,:] = [24. 5. 6. 11.]
151
152 min(cord_individual_obj[:,3]) = 5.0
153 historl_G_best_iter[iter,3] = 5.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [0. 4. 4. 8.]
158 cord_individual_obj[indivial_i,:] = [1. 6. 26. 32.]
159 cord_individual_obj[indivial_i,:] = [2. 3. 26. 29.]
160 cord_individual_obj[indivial_i,:] = [3. 5. 12. 17.]
161 cord_individual_obj[indivial_i,:] = [4. 5. 29. 34.]
162 cord_individual_obj[indivial_i,:] = [5. 5. 4. 9.]
163 cord_individual_obj[indivial_i,:] = [6. 3. 14. 17.]

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164 cord_individual_obj[indivial_i,:] = [ 7. 4. 14. 18.]
165 cord_individual_obj[indivial_i,:] = [ 8. 4. 1. 5.]
166 cord_individual_obj[indivial_i,:] = [ 9. 5. 6. 11.]
167 cord_individual_obj[indivial_i,:] = [10. 5. 33. 38.]
168 cord_individual_obj[indivial_i,:] = [11. 4. 14. 18.]
169 cord_individual_obj[indivial_i,:] = [12. 4. 43. 47.]
170 cord_individual_obj[indivial_i,:] = [13. 5. 2. 7.]
171 cord_individual_obj[indivial_i,:] = [14. 6. 16. 22.]
172 cord_individual_obj[indivial_i,:] = [15. 4. 3. 7.]
173 cord_individual_obj[indivial_i,:] = [16. 5. 13. 18.]
174 cord_individual_obj[indivial_i,:] = [17. 4. 4. 8.]
175 cord_individual_obj[indivial_i,:] = [18. 5. 26. 31.]
176 cord_individual_obj[indivial_i,:] = [19. 5. 3. 8.]
177 cord_individual_obj[indivial_i,:] = [20. 5. 13. 18.]
178 cord_individual_obj[indivial_i,:] = [21. 3. 13. 16.]
179 cord_individual_obj[indivial_i,:] = [22. 5. 2. 7.]
180 cord_individual_obj[indivial_i,:] = [23. 3. 2. 5.]
181 cord_individual_obj[indivial_i,:] = [24. 5. 6. 11.]
182
183 min(cord_individual_obj[:,3]) = 5.0
184 historl_G_best_iter[iter,3] = 5.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [ 0. 5. 15. 20.]
189 cord_individual_obj[indivial_i,:] = [1. 5. 2. 7.]
190 cord_individual_obj[indivial_i,:] = [2. 4. 4. 8.]
191 cord_individual_obj[indivial_i,:] = [3. 5. 3. 8.]
192 cord_individual_obj[indivial_i,:] = [4. 5. 13. 18.]
193 cord_individual_obj[indivial_i,:] = [5. 5. 14. 19.]
194 cord_individual_obj[indivial_i,:] = [6. 5. 6. 11.]
195 cord_individual_obj[indivial_i,:] = [7. 4. 14. 18.]
196 cord_individual_obj[indivial_i,:] = [8. 5. 4. 9.]
197 cord_individual_obj[indivial_i,:] = [9. 4. 41. 45.]
198 cord_individual_obj[indivial_i,:] = [10. 4. 2. 6.]
199 cord_individual_obj[indivial_i,:] = [11. 5. 2. 7.]
200 cord_individual_obj[indivial_i,:] = [12. 4. 1. 5.]
201 cord_individual_obj[indivial_i,:] = [13. 5. 14. 19.]
202 cord_individual_obj[indivial_i,:] = [14. 4. 15. 19.]
203 cord_individual_obj[indivial_i,:] = [15. 4. 18. 22.]
204 cord_individual_obj[indivial_i,:] = [16. 5. 3. 8.]
205 cord_individual_obj[indivial_i,:] = [17. 3. 3. 6.]
206 cord_individual_obj[indivial_i,:] = [18. 6. 5. 11.]
207 cord_individual_obj[indivial_i,:] = [19. 6. 5. 11.]
208 cord_individual_obj[indivial_i,:] = [20. 5. 19. 24.]
209 cord_individual_obj[indivial_i,:] = [21. 3. 26. 29.]
210 cord_individual_obj[indivial_i,:] = [22. 5. 4. 9.]
211 cord_individual_obj[indivial_i,:] = [23. 5. 4. 9.]
212 cord_individual_obj[indivial_i,:] = [24. 5. 6. 11.]
213
214 min(cord_individual_obj[:,3]) = 5.0
215 historl_G_best_iter[iter,3] = 5.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i,:] = [ 0. 3. 15. 18.]
220 cord_individual_obj[indivial_i,:] = [ 1. 6. 27. 33.]
221 cord_individual_obj[indivial_i,:] = [ 2. 3. 26. 29.]
222 cord_individual_obj[indivial_i,:] = [ 3. 3. 2. 5.]
223 cord_individual_obj[indivial_i,:] = [ 4. 4. 16. 20.]
224 cord_individual_obj[indivial_i,:] = [ 5. 4. 3. 7.]
225 cord_individual_obj[indivial_i,:] = [ 6. 4. 14. 18.]
226 cord_individual_obj[indivial_i,:] = [ 7. 4. 14. 18.]
227 cord_individual_obj[indivial_i,:] = [ 8. 5. 3. 8.]
228 cord_individual_obj[indivial_i,:] = [ 9. 4. 1. 5.]
229 cord_individual_obj[indivial_i,:] = [10. 5. 42. 47.]
230 cord_individual_obj[indivial_i,:] = [11. 5. 14. 19.]
231 cord_individual_obj[indivial_i,:] = [12. 4. 3. 7.]
232 cord_individual_obj[indivial_i,:] = [13. 5. 3. 8.]
233 cord_individual_obj[indivial_i,:] = [14. 7. 9. 16.]
234 cord_individual_obj[indivial_i,:] = [15. 4. 26. 30.]
235 cord_individual_obj[indivial_i,:] = [16. 3. 15. 18.]
236 cord_individual_obj[indivial_i,:] = [17. 5. 2. 7.]
237 cord_individual_obj[indivial_i,:] = [18. 5. 4. 9.]
238 cord_individual_obj[indivial_i,:] = [19. 5. 2. 7.]
239 cord_individual_obj[indivial_i,:] = [20. 5. 14. 19.]
240 cord_individual_obj[indivial_i,:] = [21. 4. 38. 42.]
241 cord_individual_obj[indivial_i,:] = [22. 5. 14. 19.]
242 cord_individual_obj[indivial_i,:] = [23. 4. 2. 6.]
243 cord_individual_obj[indivial_i,:] = [24. 5. 7. 12.]
244
245 min(cord_individual_obj[:,3]) = 5.0
246 historl_G_best_iter[iter,3] = 5.0
247 Begin iteration:

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248 iter = 7
249 cord_individual_obj[indivial_i, :] = [ 0. 5. 15. 20.]
250 cord_individual_obj[indivial_i, :] = [1. 6. 3. 9.]
251 cord_individual_obj[indivial_i, :] = [2. 3. 2. 5.]
252 cord_individual_obj[indivial_i, :] = [3. 4. 2. 6.]
253 cord_individual_obj[indivial_i, :] = [4. 7. 3. 10.]
254 cord_individual_obj[indivial_i, :] = [5. 4. 1. 5.]
255 cord_individual_obj[indivial_i, :] = [6. 4. 14. 18.]
256 cord_individual_obj[indivial_i, :] = [7. 4. 15. 19.]
257 cord_individual_obj[indivial_i, :] = [8. 4. 2. 6.]
258 cord_individual_obj[indivial_i, :] = [9. 5. 5. 10.]
259 cord_individual_obj[indivial_i, :] = [10. 3. 2. 5.]
260 cord_individual_obj[indivial_i, :] = [11. 5. 2. 7.]
261 cord_individual_obj[indivial_i, :] = [12. 4. 2. 6.]
262 cord_individual_obj[indivial_i, :] = [13. 5. 15. 20.]
263 cord_individual_obj[indivial_i, :] = [14. 5. 6. 11.]
264 cord_individual_obj[indivial_i, :] = [15. 4. 38. 42.]
265 cord_individual_obj[indivial_i, :] = [16. 5. 25. 30.]
266 cord_individual_obj[indivial_i, :] = [17. 3. 14. 17.]
267 cord_individual_obj[indivial_i, :] = [18. 5. 4. 9.]
268 cord_individual_obj[indivial_i, :] = [19. 5. 3. 8.]
269 cord_individual_obj[indivial_i, :] = [20. 5. 13. 18.]
270 cord_individual_obj[indivial_i, :] = [21. 4. 38. 42.]
271 cord_individual_obj[indivial_i, :] = [22. 4. 14. 18.]
272 cord_individual_obj[indivial_i, :] = [23. 3. 2. 5.]
273 cord_individual_obj[indivial_i, :] = [24. 5. 16. 21.]
274
275
276 min(cord_individual_obj[:, 3]) = 5.0
277 historl_G_best_iter[iter, 3] = 5.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0. 5. 15. 20.]
282 cord_individual_obj[indivial_i, :] = [1. 5. 2. 7.]
283 cord_individual_obj[indivial_i, :] = [2. 3. 26. 29.]
284 cord_individual_obj[indivial_i, :] = [3. 5. 43. 48.]
285 cord_individual_obj[indivial_i, :] = [4. 4. 16. 20.]
286 cord_individual_obj[indivial_i, :] = [5. 3. 3. 6.]
287 cord_individual_obj[indivial_i, :] = [6. 4. 14. 18.]
288 cord_individual_obj[indivial_i, :] = [7. 5. 9. 14.]
289 cord_individual_obj[indivial_i, :] = [8. 4. 1. 5.]
290 cord_individual_obj[indivial_i, :] = [9. 3. 13. 16.]
291 cord_individual_obj[indivial_i, :] = [10. 3. 2. 5.]
292 cord_individual_obj[indivial_i, :] = [11. 5. 6. 11.]
293 cord_individual_obj[indivial_i, :] = [12. 3. 8. 11.]
294 cord_individual_obj[indivial_i, :] = [13. 5. 4. 9.]
295 cord_individual_obj[indivial_i, :] = [14. 4. 3. 7.]
296 cord_individual_obj[indivial_i, :] = [15. 3. 2. 5.]
297 cord_individual_obj[indivial_i, :] = [16. 5. 2. 7.]
298 cord_individual_obj[indivial_i, :] = [17. 5. 4. 9.]
299 cord_individual_obj[indivial_i, :] = [18. 5. 12. 17.]
300 cord_individual_obj[indivial_i, :] = [19. 3. 30. 33.]
301 cord_individual_obj[indivial_i, :] = [20. 5. 17. 22.]
302 cord_individual_obj[indivial_i, :] = [21. 3. 14. 17.]
303 cord_individual_obj[indivial_i, :] = [22. 5. 7. 12.]
304 cord_individual_obj[indivial_i, :] = [23. 3. 2. 5.]
305 cord_individual_obj[indivial_i, :] = [24. 5. 7. 12.]
306
307 min(cord_individual_obj[:, 3]) = 5.0
308 historl_G_best_iter[iter, 3] = 5.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [0. 5. 4. 9.]
313 cord_individual_obj[indivial_i, :] = [1. 5. 4. 9.]
314 cord_individual_obj[indivial_i, :] = [2. 3. 18. 21.]
315 cord_individual_obj[indivial_i, :] = [3. 4. 1. 5.]
316 cord_individual_obj[indivial_i, :] = [4. 5. 18. 23.]
317 cord_individual_obj[indivial_i, :] = [5. 5. 4. 9.]
318 cord_individual_obj[indivial_i, :] = [6. 4. 13. 17.]
319 cord_individual_obj[indivial_i, :] = [7. 3. 18. 21.]
320 cord_individual_obj[indivial_i, :] = [8. 3. 18. 21.]
321 cord_individual_obj[indivial_i, :] = [9. 5. 3. 8.]
322 cord_individual_obj[indivial_i, :] = [10. 5. 12. 17.]
323 cord_individual_obj[indivial_i, :] = [11. 5. 3. 8.]
324 cord_individual_obj[indivial_i, :] = [12. 5. 2. 7.]
325 cord_individual_obj[indivial_i, :] = [13. 6. 2. 8.]
326 cord_individual_obj[indivial_i, :] = [14. 4. 38. 42.]
327 cord_individual_obj[indivial_i, :] = [15. 4. 19. 23.]
328 cord_individual_obj[indivial_i, :] = [16. 5. 30. 35.]
329 cord_individual_obj[indivial_i, :] = [17. 5. 1. 6.]
330 cord_individual_obj[indivial_i, :] = [18. 5. 3. 8.]
331 cord_individual_obj[indivial_i, :] = [19. 5. 3. 8.]

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332     cord_individual_obj[indivial_i, :] = [20. 5. 6. 11.]
333     cord_individual_obj[indivial_i, :] = [21. 4. 23. 27.]
334     cord_individual_obj[indivial_i, :] = [22. 5. 6. 11.]
335     cord_individual_obj[indivial_i, :] = [23. 3. 18. 21.]
336     cord_individual_obj[indivial_i, :] = [24. 5. 4. 9.]
337
338     min(cord_individual_obj[:, 3]) = 5.0
339     historl_G_best_iter[iter, 3] = 5.0
340 Begin iteration:
341
342 iter = 10
343     cord_individual_obj[indivial_i, :] = [ 0. 6. 15. 21.]
344     cord_individual_obj[indivial_i, :] = [ 1. 3. 14. 17.]
345     cord_individual_obj[indivial_i, :] = [ 2. 4. 19. 23.]
346     cord_individual_obj[indivial_i, :] = [ 3. 5. 31. 36.]
347     cord_individual_obj[indivial_i, :] = [ 4. 5. 6. 11.]
348     cord_individual_obj[indivial_i, :] = [ 5. 3. 12. 15.]
349     cord_individual_obj[indivial_i, :] = [ 6. 3. 24. 27.]
350     cord_individual_obj[indivial_i, :] = [ 7. 3. 18. 21.]
351     cord_individual_obj[indivial_i, :] = [ 8. 3. 18. 21.]
352     cord_individual_obj[indivial_i, :] = [ 9. 5. 31. 36.]
353     cord_individual_obj[indivial_i, :] = [10. 5. 26. 31.]
354     cord_individual_obj[indivial_i, :] = [11. 5. 3. 8.]
355     cord_individual_obj[indivial_i, :] = [12. 4. 2. 6.]
356     cord_individual_obj[indivial_i, :] = [13. 5. 2. 7.]
357     cord_individual_obj[indivial_i, :] = [14. 4. 1. 5.]
358     cord_individual_obj[indivial_i, :] = [15. 4. 18. 22.]
359     cord_individual_obj[indivial_i, :] = [16. 5. 12. 17.]
360     cord_individual_obj[indivial_i, :] = [17. 3. 2. 5.]
361     cord_individual_obj[indivial_i, :] = [18. 5. 3. 8.]
362     cord_individual_obj[indivial_i, :] = [19. 3. 38. 41.]
363     cord_individual_obj[indivial_i, :] = [20. 5. 16. 21.]
364     cord_individual_obj[indivial_i, :] = [21. 3. 13. 16.]
365     cord_individual_obj[indivial_i, :] = [22. 5. 6. 11.]
366     cord_individual_obj[indivial_i, :] = [23. 3. 18. 21.]
367     cord_individual_obj[indivial_i, :] = [24. 5. 19. 24.]
368
369     min(cord_individual_obj[:, 3]) = 5.0
370     historl_G_best_iter[iter, 3] = 5.0
371 Begin iteration:
372
373 iter = 11
374     cord_individual_obj[indivial_i, :] = [ 0. 6. 5. 11.]
375     cord_individual_obj[indivial_i, :] = [ 1. 3. 26. 29.]
376     cord_individual_obj[indivial_i, :] = [ 2. 3. 18. 21.]
377     cord_individual_obj[indivial_i, :] = [ 3. 4. 39. 43.]
378     cord_individual_obj[indivial_i, :] = [ 4. 5. 18. 23.]
379     cord_individual_obj[indivial_i, :] = [ 5. 5. 30. 35.]
380     cord_individual_obj[indivial_i, :] = [ 6. 5. 6. 11.]
381     cord_individual_obj[indivial_i, :] = [ 7. 5. 6. 11.]
382     cord_individual_obj[indivial_i, :] = [ 8. 4. 18. 22.]
383     cord_individual_obj[indivial_i, :] = [ 9. 5. 30. 35.]
384     cord_individual_obj[indivial_i, :] = [10. 3. 12. 15.]
385     cord_individual_obj[indivial_i, :] = [11. 5. 3. 8.]
386     cord_individual_obj[indivial_i, :] = [12. 4. 2. 6.]
387     cord_individual_obj[indivial_i, :] = [13. 4. 18. 22.]
388     cord_individual_obj[indivial_i, :] = [14. 6. 8. 14.]
389     cord_individual_obj[indivial_i, :] = [15. 4. 38. 42.]
390     cord_individual_obj[indivial_i, :] = [16. 5. 12. 17.]
391     cord_individual_obj[indivial_i, :] = [17. 3. 2. 5.]
392     cord_individual_obj[indivial_i, :] = [18. 5. 3. 8.]
393     cord_individual_obj[indivial_i, :] = [19. 4. 1. 5.]
394     cord_individual_obj[indivial_i, :] = [20. 5. 6. 11.]
395     cord_individual_obj[indivial_i, :] = [21. 3. 13. 16.]
396     cord_individual_obj[indivial_i, :] = [22. 5. 6. 11.]
397     cord_individual_obj[indivial_i, :] = [23. 3. 24. 27.]
398     cord_individual_obj[indivial_i, :] = [24. 5. 12. 17.]
399
400     min(cord_individual_obj[:, 3]) = 5.0
401     historl_G_best_iter[iter, 3] = 5.0
402 Begin iteration:
403
404 iter = 12
405     cord_individual_obj[indivial_i, :] = [0. 5. 4. 9.]
406     cord_individual_obj[indivial_i, :] = [1. 4. 15. 19.]
407     cord_individual_obj[indivial_i, :] = [2. 4. 4. 8.]
408     cord_individual_obj[indivial_i, :] = [3. 3. 2. 5.]
409     cord_individual_obj[indivial_i, :] = [4. 4. 26. 30.]
410     cord_individual_obj[indivial_i, :] = [5. 5. 4. 9.]
411     cord_individual_obj[indivial_i, :] = [6. 3. 14. 17.]
412     cord_individual_obj[indivial_i, :] = [7. 3. 14. 17.]
413     cord_individual_obj[indivial_i, :] = [8. 5. 4. 9.]
414     cord_individual_obj[indivial_i, :] = [9. 5. 6. 11.]
415     cord_individual_obj[indivial_i, :] = [10. 5. 2. 7.]

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416 cord_individual_obj[indivial_i,:] = [11. 5. 4. 9.]
417 cord_individual_obj[indivial_i,:] = [12. 3. 38. 41.]
418 cord_individual_obj[indivial_i,:] = [13. 4. 3. 7.]
419 cord_individual_obj[indivial_i,:] = [14. 5. 15. 20.]
420 cord_individual_obj[indivial_i,:] = [15. 3. 56. 59.]
421 cord_individual_obj[indivial_i,:] = [16. 6. 4. 10.]
422 cord_individual_obj[indivial_i,:] = [17. 5. 15. 20.]
423 cord_individual_obj[indivial_i,:] = [18. 5. 2. 7.]
424 cord_individual_obj[indivial_i,:] = [19. 5. 4. 9.]
425 cord_individual_obj[indivial_i,:] = [20. 5. 7. 12.]
426 cord_individual_obj[indivial_i,:] = [21. 4. 26. 30.]
427 cord_individual_obj[indivial_i,:] = [22. 5. 6. 11.]
428 cord_individual_obj[indivial_i,:] = [23. 3. 14. 17.]
429 cord_individual_obj[indivial_i,:] = [24. 5. 7. 12.]
430
431 min(cord_individual_obj[:,3]) = 5.0
432 histol_G_best_iter[iter,3] = 5.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 5. 15. 20.]
437 cord_individual_obj[indivial_i,:] = [1. 3. 2. 5.]
438 cord_individual_obj[indivial_i,:] = [2. 3. 2. 5.]
439 cord_individual_obj[indivial_i,:] = [3. 5. 2. 7.]
440 cord_individual_obj[indivial_i,:] = [4. 5. 2. 7.]
441 cord_individual_obj[indivial_i,:] = [5. 4. 2. 6.]
442 cord_individual_obj[indivial_i,:] = [6. 4. 15. 19.]
443 cord_individual_obj[indivial_i,:] = [7. 5. 7. 12.]
444 cord_individual_obj[indivial_i,:] = [8. 4. 1. 5.]
445 cord_individual_obj[indivial_i,:] = [9. 5. 6. 11.]
446 cord_individual_obj[indivial_i,:] = [10. 4. 3. 7.]
447 cord_individual_obj[indivial_i,:] = [11. 5. 3. 8.]
448 cord_individual_obj[indivial_i,:] = [12. 3. 18. 21.]
449 cord_individual_obj[indivial_i,:] = [13. 5. 19. 24.]
450 cord_individual_obj[indivial_i,:] = [14. 3. 15. 18.]
451 cord_individual_obj[indivial_i,:] = [15. 3. 2. 5.]
452 cord_individual_obj[indivial_i,:] = [16. 5. 3. 8.]
453 cord_individual_obj[indivial_i,:] = [17. 4. 16. 20.]
454 cord_individual_obj[indivial_i,:] = [18. 5. 14. 19.]
455 cord_individual_obj[indivial_i,:] = [19. 6. 5. 11.]
456 cord_individual_obj[indivial_i,:] = [20. 5. 17. 22.]
457 cord_individual_obj[indivial_i,:] = [21. 4. 14. 18.]
458 cord_individual_obj[indivial_i,:] = [22. 3. 14. 17.]
459 cord_individual_obj[indivial_i,:] = [23. 3. 14. 17.]
460 cord_individual_obj[indivial_i,:] = [24. 6. 9. 15.]
461
462 min(cord_individual_obj[:,3]) = 5.0
463 histol_G_best_iter[iter,3] = 5.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 5. 15. 20.]
468 cord_individual_obj[indivial_i,:] = [1. 3. 26. 29.]
469 cord_individual_obj[indivial_i,:] = [2. 5. 16. 21.]
470 cord_individual_obj[indivial_i,:] = [3. 5. 15. 20.]
471 cord_individual_obj[indivial_i,:] = [4. 5. 15. 20.]
472 cord_individual_obj[indivial_i,:] = [5. 5. 2. 7.]
473 cord_individual_obj[indivial_i,:] = [6. 5. 14. 19.]
474 cord_individual_obj[indivial_i,:] = [7. 5. 6. 11.]
475 cord_individual_obj[indivial_i,:] = [8. 4. 14. 18.]
476 cord_individual_obj[indivial_i,:] = [9. 5. 7. 12.]
477 cord_individual_obj[indivial_i,:] = [10. 5. 3. 8.]
478 cord_individual_obj[indivial_i,:] = [11. 4. 38. 42.]
479 cord_individual_obj[indivial_i,:] = [12. 5. 26. 31.]
480 cord_individual_obj[indivial_i,:] = [13. 3. 2. 5.]
481 cord_individual_obj[indivial_i,:] = [14. 4. 15. 19.]
482 cord_individual_obj[indivial_i,:] = [15. 4. 42. 46.]
483 cord_individual_obj[indivial_i,:] = [16. 5. 14. 19.]
484 cord_individual_obj[indivial_i,:] = [17. 5. 6. 11.]
485 cord_individual_obj[indivial_i,:] = [18. 7. 9. 16.]
486 cord_individual_obj[indivial_i,:] = [19. 5. 6. 11.]
487 cord_individual_obj[indivial_i,:] = [20. 5. 14. 19.]
488 cord_individual_obj[indivial_i,:] = [21. 5. 38. 43.]
489 cord_individual_obj[indivial_i,:] = [22. 5. 14. 19.]
490 cord_individual_obj[indivial_i,:] = [23. 4. 14. 18.]
491 cord_individual_obj[indivial_i,:] = [24. 6. 7. 13.]
492
493 min(cord_individual_obj[:,3]) = 5.0
494 histol_G_best_iter[iter,3] = 5.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 5. 15. 20.]
499 cord_individual_obj[indivial_i,:] = [1. 4. 27. 31.]

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500 cord_individual_obj[indivial_i, :] = [ 2. 4. 15. 19.]
501 cord_individual_obj[indivial_i, :] = [ 3. 4. 15. 19.]
502 cord_individual_obj[indivial_i, :] = [ 4. 5. 7. 12.]
503 cord_individual_obj[indivial_i, :] = [ 5. 6. 2. 8.]
504 cord_individual_obj[indivial_i, :] = [ 6. 5. 14. 19.]
505 cord_individual_obj[indivial_i, :] = [ 7. 3. 14. 17.]
506 cord_individual_obj[indivial_i, :] = [ 8. 4. 14. 18.]
507 cord_individual_obj[indivial_i, :] = [ 9. 5. 15. 20.]
508 cord_individual_obj[indivial_i, :] = [10. 6. 3. 9.]
509 cord_individual_obj[indivial_i, :] = [11. 5. 14. 19.]
510 cord_individual_obj[indivial_i, :] = [12. 3. 42. 45.]
511 cord_individual_obj[indivial_i, :] = [13. 5. 14. 19.]
512 cord_individual_obj[indivial_i, :] = [14. 5. 5. 10.]
513 cord_individual_obj[indivial_i, :] = [15. 3. 2. 5.]
514 cord_individual_obj[indivial_i, :] = [16. 5. 16. 21.]
515 cord_individual_obj[indivial_i, :] = [17. 4. 2. 6.]
516 cord_individual_obj[indivial_i, :] = [18. 5. 7. 12.]
517 cord_individual_obj[indivial_i, :] = [19. 5. 26. 31.]
518 cord_individual_obj[indivial_i, :] = [20. 4. 37. 41.]
519 cord_individual_obj[indivial_i, :] = [21. 5. 38. 43.]
520 cord_individual_obj[indivial_i, :] = [22. 5. 26. 31.]
521 cord_individual_obj[indivial_i, :] = [23. 5. 26. 31.]
522 cord_individual_obj[indivial_i, :] = [24. 5. 7. 12.]
523
524 min(cord_individual_obj[:, 3]) = 5.0
525 histol_G_best_iter[iter, 3] = 5.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i, :] = [ 0. 5. 15. 20.]
530 cord_individual_obj[indivial_i, :] = [ 1. 4. 27. 31.]
531 cord_individual_obj[indivial_i, :] = [ 2. 4. 15. 19.]
532 cord_individual_obj[indivial_i, :] = [ 3. 5. 7. 12.]
533 cord_individual_obj[indivial_i, :] = [ 4. 6. 27. 33.]
534 cord_individual_obj[indivial_i, :] = [ 5. 5. 2. 7.]
535 cord_individual_obj[indivial_i, :] = [ 6. 4. 26. 30.]
536 cord_individual_obj[indivial_i, :] = [ 7. 5. 6. 11.]
537 cord_individual_obj[indivial_i, :] = [ 8. 4. 15. 19.]
538 cord_individual_obj[indivial_i, :] = [ 9. 5. 7. 12.]
539 cord_individual_obj[indivial_i, :] = [10. 4. 2. 6.]
540 cord_individual_obj[indivial_i, :] = [11. 4. 26. 30.]
541 cord_individual_obj[indivial_i, :] = [12. 3. 2. 5.]
542 cord_individual_obj[indivial_i, :] = [13. 3. 38. 41.]
543 cord_individual_obj[indivial_i, :] = [14. 4. 3. 7.]
544 cord_individual_obj[indivial_i, :] = [15. 3. 74. 77.]
545 cord_individual_obj[indivial_i, :] = [16. 4. 27. 31.]
546 cord_individual_obj[indivial_i, :] = [17. 5. 2. 7.]
547 cord_individual_obj[indivial_i, :] = [18. 6. 9. 15.]
548 cord_individual_obj[indivial_i, :] = [19. 5. 8. 13.]
549 cord_individual_obj[indivial_i, :] = [20. 5. 37. 42.]
550 cord_individual_obj[indivial_i, :] = [21. 3. 38. 41.]
551 cord_individual_obj[indivial_i, :] = [22. 6. 14. 20.]
552 cord_individual_obj[indivial_i, :] = [23. 5. 26. 31.]
553 cord_individual_obj[indivial_i, :] = [24. 5. 6. 11.]
554
555 min(cord_individual_obj[:, 3]) = 5.0
556 histol_G_best_iter[iter, 3] = 5.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i, :] = [ 0. 5. 15. 20.]
561 cord_individual_obj[indivial_i, :] = [ 1. 3. 26. 29.]
562 cord_individual_obj[indivial_i, :] = [ 2. 5. 16. 21.]
563 cord_individual_obj[indivial_i, :] = [ 3. 5. 15. 20.]
564 cord_individual_obj[indivial_i, :] = [ 4. 5. 15. 20.]
565 cord_individual_obj[indivial_i, :] = [ 5. 5. 2. 7.]
566 cord_individual_obj[indivial_i, :] = [ 6. 4. 38. 42.]
567 cord_individual_obj[indivial_i, :] = [ 7. 5. 14. 19.]
568 cord_individual_obj[indivial_i, :] = [ 8. 4. 14. 18.]
569 cord_individual_obj[indivial_i, :] = [ 9. 5. 7. 12.]
570 cord_individual_obj[indivial_i, :] = [10. 3. 14. 17.]
571 cord_individual_obj[indivial_i, :] = [11. 5. 14. 19.]
572 cord_individual_obj[indivial_i, :] = [12. 5. 26. 31.]
573 cord_individual_obj[indivial_i, :] = [13. 5. 14. 19.]
574 cord_individual_obj[indivial_i, :] = [14. 5. 7. 12.]
575 cord_individual_obj[indivial_i, :] = [15. 3. 2. 5.]
576 cord_individual_obj[indivial_i, :] = [16. 5. 26. 31.]
577 cord_individual_obj[indivial_i, :] = [17. 5. 6. 11.]
578 cord_individual_obj[indivial_i, :] = [18. 6. 7. 13.]
579 cord_individual_obj[indivial_i, :] = [19. 3. 14. 17.]
580 cord_individual_obj[indivial_i, :] = [20. 4. 26. 30.]
581 cord_individual_obj[indivial_i, :] = [21. 5. 38. 43.]
582 cord_individual_obj[indivial_i, :] = [22. 5. 14. 19.]
583 cord_individual_obj[indivial_i, :] = [23. 4. 14. 18.]

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unknown

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584     cord_individual_obj[indivial_i, :] = [24. 5. 7. 12.]
585
586     min(cord_individual_obj[:, 3]) = 5.0
587     historl_G_best_iter[iter, 3] = 5.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [0. 3. 2. 5.]
592     cord_individual_obj[indivial_i, :] = [1. 3. 2. 5.]
593     cord_individual_obj[indivial_i, :] = [2. 3. 15. 18.]
594     cord_individual_obj[indivial_i, :] = [3. 3. 2. 5.]
595     cord_individual_obj[indivial_i, :] = [4. 6. 27. 33.]
596     cord_individual_obj[indivial_i, :] = [5. 6. 2. 8.]
597     cord_individual_obj[indivial_i, :] = [6. 5. 2. 7.]
598     cord_individual_obj[indivial_i, :] = [7. 5. 14. 19.]
599     cord_individual_obj[indivial_i, :] = [8. 6. 4. 10.]
600     cord_individual_obj[indivial_i, :] = [9. 4. 32. 36.]
601     cord_individual_obj[indivial_i, :] = [10. 5. 2. 7.]
602     cord_individual_obj[indivial_i, :] = [11. 4. 26. 30.]
603     cord_individual_obj[indivial_i, :] = [12. 3. 38. 41.]
604     cord_individual_obj[indivial_i, :] = [13. 3. 2. 5.]
605     cord_individual_obj[indivial_i, :] = [14. 5. 2. 7.]
606     cord_individual_obj[indivial_i, :] = [15. 3. 74. 77.]
607     cord_individual_obj[indivial_i, :] = [16. 5. 3. 8.]
608     cord_individual_obj[indivial_i, :] = [17. 4. 13. 17.]
609     cord_individual_obj[indivial_i, :] = [18. 5. 2. 7.]
610     cord_individual_obj[indivial_i, :] = [19. 7. 3. 10.]
611     cord_individual_obj[indivial_i, :] = [20. 4. 3. 7.]
612     cord_individual_obj[indivial_i, :] = [21. 3. 2. 5.]
613     cord_individual_obj[indivial_i, :] = [22. 7. 3. 10.]
614     cord_individual_obj[indivial_i, :] = [23. 5. 2. 7.]
615     cord_individual_obj[indivial_i, :] = [24. 5. 15. 20.]
616
617     min(cord_individual_obj[:, 3]) = 5.0
618     historl_G_best_iter[iter, 3] = 5.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [0. 5. 30. 35.]
623     cord_individual_obj[indivial_i, :] = [1. 3. 26. 29.]
624     cord_individual_obj[indivial_i, :] = [2. 4. 3. 7.]
625     cord_individual_obj[indivial_i, :] = [3. 5. 18. 23.]
626     cord_individual_obj[indivial_i, :] = [4. 5. 7. 12.]
627     cord_individual_obj[indivial_i, :] = [5. 4. 18. 22.]
628     cord_individual_obj[indivial_i, :] = [6. 4. 15. 19.]
629     cord_individual_obj[indivial_i, :] = [7. 5. 7. 12.]
630     cord_individual_obj[indivial_i, :] = [8. 4. 14. 18.]
631     cord_individual_obj[indivial_i, :] = [9. 5. 18. 23.]
632     cord_individual_obj[indivial_i, :] = [10. 4. 32. 36.]
633     cord_individual_obj[indivial_i, :] = [11. 5. 31. 36.]
634     cord_individual_obj[indivial_i, :] = [12. 3. 42. 45.]
635     cord_individual_obj[indivial_i, :] = [13. 5. 30. 35.]
636     cord_individual_obj[indivial_i, :] = [14. 6. 15. 21.]
637     cord_individual_obj[indivial_i, :] = [15. 3. 2. 5.]
638     cord_individual_obj[indivial_i, :] = [16. 5. 26. 31.]
639     cord_individual_obj[indivial_i, :] = [17. 4. 13. 17.]
640     cord_individual_obj[indivial_i, :] = [18. 6. 2. 8.]
641     cord_individual_obj[indivial_i, :] = [19. 4. 14. 18.]
642     cord_individual_obj[indivial_i, :] = [20. 5. 6. 11.]
643     cord_individual_obj[indivial_i, :] = [21. 6. 32. 38.]
644     cord_individual_obj[indivial_i, :] = [22. 4. 15. 19.]
645     cord_individual_obj[indivial_i, :] = [23. 5. 42. 47.]
646     cord_individual_obj[indivial_i, :] = [24. 5. 18. 23.]
647
648     min(cord_individual_obj[:, 3]) = 5.0
649     historl_G_best_iter[iter, 3] = 5.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [0. 3. 31. 34.]
654     cord_individual_obj[indivial_i, :] = [1. 4. 39. 43.]
655     cord_individual_obj[indivial_i, :] = [2. 3. 26. 29.]
656     cord_individual_obj[indivial_i, :] = [3. 4. 32. 36.]
657     cord_individual_obj[indivial_i, :] = [4. 5. 26. 31.]
658     cord_individual_obj[indivial_i, :] = [5. 5. 12. 17.]
659     cord_individual_obj[indivial_i, :] = [6. 3. 14. 17.]
660     cord_individual_obj[indivial_i, :] = [7. 5. 18. 23.]
661     cord_individual_obj[indivial_i, :] = [8. 4. 14. 18.]
662     cord_individual_obj[indivial_i, :] = [9. 4. 33. 37.]
663     cord_individual_obj[indivial_i, :] = [10. 4. 74. 78.]
664     cord_individual_obj[indivial_i, :] = [11. 5. 28. 33.]
665     cord_individual_obj[indivial_i, :] = [12. 3. 32. 35.]
666     cord_individual_obj[indivial_i, :] = [13. 5. 14. 19.]
667     cord_individual_obj[indivial_i, :] = [14. 5. 2. 7.]
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unknown

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668 cord_individual_obj[individual_i, :] = [15. 3. 32. 35.]
669 cord_individual_obj[individual_i, :] = [16. 5. 18. 23.]
670 cord_individual_obj[individual_i, :] = [17. 4. 1. 5.]
671 cord_individual_obj[individual_i, :] = [18. 6. 19. 25.]
672 cord_individual_obj[individual_i, :] = [19. 6. 9. 15.]
673 cord_individual_obj[individual_i, :] = [20. 4. 16. 20.]
674 cord_individual_obj[individual_i, :] = [21. 5. 14. 19.]
675 cord_individual_obj[individual_i, :] = [22. 5. 7. 12.]
676 cord_individual_obj[individual_i, :] = [23. 3. 2. 5.]
677 cord_individual_obj[individual_i, :] = [24. 5. 18. 23.]
678
679 min(cord_individual_obj[:, 3]) = 5.0
680 historl_G_best_iter[iter, 3] = 5.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 125.0
689 Proportion_of_area = 0.11574074074074074
690 BEST_CHROM =
691     berth: [ 3. 9.5 20.5 14.5 20.5]
692     time: [0. 0. 1. 0. 0.]
693     num_QC: [6. 3. 2. 3. 6.]
694 Objective function values and some other indicators:
695 Obj0 = 4.00          Obj1 = 1.00          Obj0 + Obj1 = 5.00
696 Total movement of crane: 0.00
697 Total waiting time in berth position: 1.00
698 Total index of q during berthing: 484.00
699 Specific arrangement for each vessel:
700 V_id: 0           li: 6.0           xi: 3.0           bow of i: 0.0           tail of i: 6.0           gama_i0: 0.0           gama_i1: 1.0
    gama_i1 + 1: 2.0           gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 200.0           work load_i:
200.0           work load gap_i: 0
701 V_id: 1           li: 7.0           xi: 9.5           bow of i: 6.0           tail of i: 13.0           gama_i0: 0.0           gama_i1: 3.0
    gama_i1 + 1: 4.0           gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 200.0           work load_i:
200.0           work load gap_i: 0
702 V_id: 2           li: 9.0           xi: 20.5           bow of i: 16.0           tail of i: 25.0           gama_i0: 1.0           gama_i1: 4
    gama_i1 + 1: 5.0           gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 140.0           work
load_i: 140.0           work load gap_i: 0
703 V_id: 3           li: 3.0           xi: 14.5           bow of i: 13.0           tail of i: 16.0           gama_i0: 0.0           gama_i1: 3
    gama_i1 + 1: 4.0           gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 240.0           work
load_i: 240.0           work load gap_i: 0
704 V_id: 4           li: 9.0           xi: 20.5           bow of i: 16.0           tail of i: 25.0           gama_i0: 0.0           gama_i1: 0
    gama_i1 + 1: 1.0           gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 120.0           work
load_i: 120.0           work load gap_i: 0
705
706 Algorithm finished and the total CPU time: 136 s
707 End
708

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