

unknown

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80 cord_individual_obj[indivial_i,:] = [16. 1. 0. 1.]
81 cord_individual_obj[indivial_i,:] = [17. 1. 0. 1.]
82 cord_individual_obj[indivial_i,:] = [18. 1. 0. 1.]
83 cord_individual_obj[indivial_i,:] = [19. 1. 0. 1.]
84 cord_individual_obj[indivial_i,:] = [20. 1. 0. 1.]
85 cord_individual_obj[indivial_i,:] = [21. 1. 0. 1.]
86 cord_individual_obj[indivial_i,:] = [22. 1. 0. 1.]
87 cord_individual_obj[indivial_i,:] = [23. 1. 0. 1.]
88 cord_individual_obj[indivial_i,:] = [24. 1. 0. 1.]
89
90 min(cord_individual_obj[:,3]) = 0.0
91 historl_G_best_iter[iter,3] = 0.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [0. 0. 0. 0.]
96 cord_individual_obj[indivial_i,:] = [1. 1. 0. 1.]
97 cord_individual_obj[indivial_i,:] = [2. 0. 0. 0.]
98 cord_individual_obj[indivial_i,:] = [3. 1. 0. 1.]
99 cord_individual_obj[indivial_i,:] = [4. 1. 0. 1.]
100 cord_individual_obj[indivial_i,:] = [5. 1. 0. 1.]
101 cord_individual_obj[indivial_i,:] = [6. 1. 0. 1.]
102 cord_individual_obj[indivial_i,:] = [7. 1. 0. 1.]
103 cord_individual_obj[indivial_i,:] = [8. 0. 0. 0.]
104 cord_individual_obj[indivial_i,:] = [9. 0. 0. 0.]
105 cord_individual_obj[indivial_i,:] = [10. 0. 0. 0.]
106 cord_individual_obj[indivial_i,:] = [11. 0. 0. 0.]
107 cord_individual_obj[indivial_i,:] = [12. 0. 0. 0.]
108 cord_individual_obj[indivial_i,:] = [13. 1. 0. 1.]
109 cord_individual_obj[indivial_i,:] = [14. 1. 0. 1.]
110 cord_individual_obj[indivial_i,:] = [15. 0. 0. 0.]
111 cord_individual_obj[indivial_i,:] = [16. 0. 0. 0.]
112 cord_individual_obj[indivial_i,:] = [17. 0. 0. 0.]
113 cord_individual_obj[indivial_i,:] = [18. 1. 0. 1.]
114 cord_individual_obj[indivial_i,:] = [19. 0. 0. 0.]
115 cord_individual_obj[indivial_i,:] = [20. 0. 0. 0.]
116 cord_individual_obj[indivial_i,:] = [21. 1. 0. 1.]
117 cord_individual_obj[indivial_i,:] = [22. 1. 0. 1.]
118 cord_individual_obj[indivial_i,:] = [23. 1. 0. 1.]
119 cord_individual_obj[indivial_i,:] = [24. 1. 0. 1.]
120
121 min(cord_individual_obj[:,3]) = 0.0
122 historl_G_best_iter[iter,3] = 0.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [0. 1. 0. 1.]
127 cord_individual_obj[indivial_i,:] = [1. 0. 0. 0.]
128 cord_individual_obj[indivial_i,:] = [2. 0. 0. 0.]
129 cord_individual_obj[indivial_i,:] = [3. 1. 0. 1.]
130 cord_individual_obj[indivial_i,:] = [4. 1. 0. 1.]
131 cord_individual_obj[indivial_i,:] = [5. 1. 0. 1.]
132 cord_individual_obj[indivial_i,:] = [6. 1. 0. 1.]
133 cord_individual_obj[indivial_i,:] = [7. 1. 0. 1.]
134 cord_individual_obj[indivial_i,:] = [8. 0. 0. 0.]
135 cord_individual_obj[indivial_i,:] = [9. 0. 0. 0.]
136 cord_individual_obj[indivial_i,:] = [10. 0. 0. 0.]
137 cord_individual_obj[indivial_i,:] = [11. 0. 0. 0.]
138 cord_individual_obj[indivial_i,:] = [12. 0. 0. 0.]
139 cord_individual_obj[indivial_i,:] = [13. 0. 0. 0.]
140 cord_individual_obj[indivial_i,:] = [14. 1. 0. 1.]
141 cord_individual_obj[indivial_i,:] = [15. 0. 0. 0.]
142 cord_individual_obj[indivial_i,:] = [16. 0. 0. 0.]
143 cord_individual_obj[indivial_i,:] = [17. 0. 0. 0.]
144 cord_individual_obj[indivial_i,:] = [18. 1. 0. 1.]
145 cord_individual_obj[indivial_i,:] = [19. 0. 0. 0.]
146 cord_individual_obj[indivial_i,:] = [20. 0. 0. 0.]
147 cord_individual_obj[indivial_i,:] = [21. 1. 0. 1.]
148 cord_individual_obj[indivial_i,:] = [22. 1. 0. 1.]
149 cord_individual_obj[indivial_i,:] = [23. 1. 0. 1.]
150 cord_individual_obj[indivial_i,:] = [24. 1. 0. 1.]
151
152 min(cord_individual_obj[:,3]) = 0.0
153 historl_G_best_iter[iter,3] = 0.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [0. 0. 0. 0.]
158 cord_individual_obj[indivial_i,:] = [1. 1. 0. 1.]
159 cord_individual_obj[indivial_i,:] = [2. 0. 0. 0.]
160 cord_individual_obj[indivial_i,:] = [3. 1. 0. 1.]
161 cord_individual_obj[indivial_i,:] = [4. 1. 0. 1.]
162 cord_individual_obj[indivial_i,:] = [5. 1. 0. 1.]
163 cord_individual_obj[indivial_i,:] = [6. 1. 0. 1.]

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164 cord_individual_obj[indivial_i,:] = [7. 1. 0. 1.]
165 cord_individual_obj[indivial_i,:] = [8. 0. 0. 0.]
166 cord_individual_obj[indivial_i,:] = [9. 0. 0. 0.]
167 cord_individual_obj[indivial_i,:] = [10. 0. 0. 0.]
168 cord_individual_obj[indivial_i,:] = [11. 0. 0. 0.]
169 cord_individual_obj[indivial_i,:] = [12. 0. 0. 0.]
170 cord_individual_obj[indivial_i,:] = [13. 1. 0. 1.]
171 cord_individual_obj[indivial_i,:] = [14. 0. 0. 0.]
172 cord_individual_obj[indivial_i,:] = [15. 0. 0. 0.]
173 cord_individual_obj[indivial_i,:] = [16. 0. 0. 0.]
174 cord_individual_obj[indivial_i,:] = [17. 0. 0. 0.]
175 cord_individual_obj[indivial_i,:] = [18. 1. 0. 1.]
176 cord_individual_obj[indivial_i,:] = [19. 0. 0. 0.]
177 cord_individual_obj[indivial_i,:] = [20. 0. 0. 0.]
178 cord_individual_obj[indivial_i,:] = [21. 1. 0. 1.]
179 cord_individual_obj[indivial_i,:] = [22. 1. 0. 1.]
180 cord_individual_obj[indivial_i,:] = [23. 1. 0. 1.]
181 cord_individual_obj[indivial_i,:] = [24. 0. 0. 0.]
182
183 min(cord_individual_obj[:,3]) = 0.0
184 historl_G_best_iter[iter,3] = 0.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [0. 1. 0. 1.]
189 cord_individual_obj[indivial_i,:] = [1. 0. 0. 0.]
190 cord_individual_obj[indivial_i,:] = [2. 0. 0. 0.]
191 cord_individual_obj[indivial_i,:] = [3. 1. 0. 1.]
192 cord_individual_obj[indivial_i,:] = [4. 1. 0. 1.]
193 cord_individual_obj[indivial_i,:] = [5. 2. 0. 2.]
194 cord_individual_obj[indivial_i,:] = [6. 1. 0. 1.]
195 cord_individual_obj[indivial_i,:] = [7. 1. 0. 1.]
196 cord_individual_obj[indivial_i,:] = [8. 0. 0. 0.]
197 cord_individual_obj[indivial_i,:] = [9. 0. 0. 0.]
198 cord_individual_obj[indivial_i,:] = [10. 0. 0. 0.]
199 cord_individual_obj[indivial_i,:] = [11. 0. 0. 0.]
200 cord_individual_obj[indivial_i,:] = [12. 3. 0. 3.]
201 cord_individual_obj[indivial_i,:] = [13. 1. 0. 1.]
202 cord_individual_obj[indivial_i,:] = [14. 1. 0. 1.]
203 cord_individual_obj[indivial_i,:] = [15. 1. 0. 1.]
204 cord_individual_obj[indivial_i,:] = [16. 1. 0. 1.]
205 cord_individual_obj[indivial_i,:] = [17. 0. 0. 0.]
206 cord_individual_obj[indivial_i,:] = [18. 2. 0. 2.]
207 cord_individual_obj[indivial_i,:] = [19. 1. 0. 1.]
208 cord_individual_obj[indivial_i,:] = [20. 0. 0. 0.]
209 cord_individual_obj[indivial_i,:] = [21. 1. 0. 1.]
210 cord_individual_obj[indivial_i,:] = [22. 1. 0. 1.]
211 cord_individual_obj[indivial_i,:] = [23. 1. 0. 1.]
212 cord_individual_obj[indivial_i,:] = [24. 1. 0. 1.]
213
214 min(cord_individual_obj[:,3]) = 0.0
215 historl_G_best_iter[iter,3] = 0.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i,:] = [0. 1. 0. 1.]
220 cord_individual_obj[indivial_i,:] = [1. 1. 0. 1.]
221 cord_individual_obj[indivial_i,:] = [2. 0. 0. 0.]
222 cord_individual_obj[indivial_i,:] = [3. 0. 0. 0.]
223 cord_individual_obj[indivial_i,:] = [4. 0. 0. 0.]
224 cord_individual_obj[indivial_i,:] = [5. 1. 0. 1.]
225 cord_individual_obj[indivial_i,:] = [6. 3. 0. 3.]
226 cord_individual_obj[indivial_i,:] = [7. 1. 0. 1.]
227 cord_individual_obj[indivial_i,:] = [8. 0. 0. 0.]
228 cord_individual_obj[indivial_i,:] = [9. 0. 0. 0.]
229 cord_individual_obj[indivial_i,:] = [10. 0. 0. 0.]
230 cord_individual_obj[indivial_i,:] = [11. 0. 0. 0.]
231 cord_individual_obj[indivial_i,:] = [12. 0. 0. 0.]
232 cord_individual_obj[indivial_i,:] = [13. 0. 0. 0.]
233 cord_individual_obj[indivial_i,:] = [14. 0. 0. 0.]
234 cord_individual_obj[indivial_i,:] = [15. 1. 0. 1.]
235 cord_individual_obj[indivial_i,:] = [16. 0. 0. 0.]
236 cord_individual_obj[indivial_i,:] = [17. 0. 0. 0.]
237 cord_individual_obj[indivial_i,:] = [18. 0. 0. 0.]
238 cord_individual_obj[indivial_i,:] = [19. 0. 0. 0.]
239 cord_individual_obj[indivial_i,:] = [20. 0. 0. 0.]
240 cord_individual_obj[indivial_i,:] = [21. 1. 0. 1.]
241 cord_individual_obj[indivial_i,:] = [22. 0. 0. 0.]
242 cord_individual_obj[indivial_i,:] = [23. 1. 0. 1.]
243 cord_individual_obj[indivial_i,:] = [24. 0. 0. 0.]
244
245 min(cord_individual_obj[:,3]) = 0.0
246 historl_G_best_iter[iter,3] = 0.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [0. 1. 0. 1.]
251 cord_individual_obj[indivial_i, :] = [1. 1. 0. 1.]
252 cord_individual_obj[indivial_i, :] = [2. 0. 0. 0.]
253 cord_individual_obj[indivial_i, :] = [3. 1. 0. 1.]
254 cord_individual_obj[indivial_i, :] = [4. 1. 0. 1.]
255 cord_individual_obj[indivial_i, :] = [5. 1. 0. 1.]
256 cord_individual_obj[indivial_i, :] = [6. 0. 0. 0.]
257 cord_individual_obj[indivial_i, :] = [7. 1. 0. 1.]
258 cord_individual_obj[indivial_i, :] = [8. 0. 0. 0.]
259 cord_individual_obj[indivial_i, :] = [9. 0. 0. 0.]
260 cord_individual_obj[indivial_i, :] = [10. 0. 0. 0.]
261 cord_individual_obj[indivial_i, :] = [11. 0. 0. 0.]
262 cord_individual_obj[indivial_i, :] = [12. 0. 0. 0.]
263 cord_individual_obj[indivial_i, :] = [13. 1. 0. 1.]
264 cord_individual_obj[indivial_i, :] = [14. 1. 0. 1.]
265 cord_individual_obj[indivial_i, :] = [15. 0. 0. 0.]
266 cord_individual_obj[indivial_i, :] = [16. 0. 0. 0.]
267 cord_individual_obj[indivial_i, :] = [17. 0. 0. 0.]
268 cord_individual_obj[indivial_i, :] = [18. 1. 0. 1.]
269 cord_individual_obj[indivial_i, :] = [19. 0. 0. 0.]
270 cord_individual_obj[indivial_i, :] = [20. 0. 0. 0.]
271 cord_individual_obj[indivial_i, :] = [21. 1. 0. 1.]
272 cord_individual_obj[indivial_i, :] = [22. 1. 0. 1.]
273 cord_individual_obj[indivial_i, :] = [23. 1. 0. 1.]
274 cord_individual_obj[indivial_i, :] = [24. 1. 0. 1.]
275

276 min(cord_individual_obj[:, 3]) = 0.0
277 historl_G_best_iter[iter, 3] = 0.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [0. 0. 0. 0.]
282 cord_individual_obj[indivial_i, :] = [1. 1. 0. 1.]
283 cord_individual_obj[indivial_i, :] = [2. 0. 0. 0.]
284 cord_individual_obj[indivial_i, :] = [3. 1. 0. 1.]
285 cord_individual_obj[indivial_i, :] = [4. 1. 0. 1.]
286 cord_individual_obj[indivial_i, :] = [5. 1. 0. 1.]
287 cord_individual_obj[indivial_i, :] = [6. 1. 0. 1.]
288 cord_individual_obj[indivial_i, :] = [7. 1. 0. 1.]
289 cord_individual_obj[indivial_i, :] = [8. 0. 0. 0.]
290 cord_individual_obj[indivial_i, :] = [9. 0. 0. 0.]
291 cord_individual_obj[indivial_i, :] = [10. 0. 0. 0.]
292 cord_individual_obj[indivial_i, :] = [11. 0. 0. 0.]
293 cord_individual_obj[indivial_i, :] = [12. 0. 0. 0.]
294 cord_individual_obj[indivial_i, :] = [13. 0. 0. 0.]
295 cord_individual_obj[indivial_i, :] = [14. 0. 0. 0.]
296 cord_individual_obj[indivial_i, :] = [15. 0. 0. 0.]
297 cord_individual_obj[indivial_i, :] = [16. 0. 0. 0.]
298 cord_individual_obj[indivial_i, :] = [17. 0. 0. 0.]
299 cord_individual_obj[indivial_i, :] = [18. 1. 0. 1.]
300 cord_individual_obj[indivial_i, :] = [19. 0. 0. 0.]
301 cord_individual_obj[indivial_i, :] = [20. 0. 0. 0.]
302 cord_individual_obj[indivial_i, :] = [21. 1. 0. 1.]
303 cord_individual_obj[indivial_i, :] = [22. 1. 0. 1.]
304 cord_individual_obj[indivial_i, :] = [23. 1. 0. 1.]
305 cord_individual_obj[indivial_i, :] = [24. 0. 0. 0.]
306

307 min(cord_individual_obj[:, 3]) = 0.0
308 historl_G_best_iter[iter, 3] = 0.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [0. 1. 0. 1.]
313 cord_individual_obj[indivial_i, :] = [1. 0. 0. 0.]
314 cord_individual_obj[indivial_i, :] = [2. 0. 0. 0.]
315 cord_individual_obj[indivial_i, :] = [3. 1. 0. 1.]
316 cord_individual_obj[indivial_i, :] = [4. 1. 0. 1.]
317 cord_individual_obj[indivial_i, :] = [5. 2. 0. 2.]
318 cord_individual_obj[indivial_i, :] = [6. 3. 0. 3.]
319 cord_individual_obj[indivial_i, :] = [7. 1. 0. 1.]
320 cord_individual_obj[indivial_i, :] = [8. 0. 0. 0.]
321 cord_individual_obj[indivial_i, :] = [9. 0. 0. 0.]
322 cord_individual_obj[indivial_i, :] = [10. 0. 0. 0.]
323 cord_individual_obj[indivial_i, :] = [11. 0. 0. 0.]
324 cord_individual_obj[indivial_i, :] = [12. 0. 0. 0.]
325 cord_individual_obj[indivial_i, :] = [13. 1. 0. 1.]
326 cord_individual_obj[indivial_i, :] = [14. 1. 0. 1.]
327 cord_individual_obj[indivial_i, :] = [15. 0. 0. 0.]
328 cord_individual_obj[indivial_i, :] = [16. 0. 0. 0.]
329 cord_individual_obj[indivial_i, :] = [17. 0. 0. 0.]
330 cord_individual_obj[indivial_i, :] = [18. 1. 0. 1.]
331 cord_individual_obj[indivial_i, :] = [19. 0. 0. 0.]

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332 cord_individual_obj[indivial_i, :] = [20. 0. 0. 0.]
333 cord_individual_obj[indivial_i, :] = [21. 2. 0. 2.]
334 cord_individual_obj[indivial_i, :] = [22. 1. 0. 1.]
335 cord_individual_obj[indivial_i, :] = [23. 1. 0. 1.]
336 cord_individual_obj[indivial_i, :] = [24. 1. 0. 1.]
337
338 min(cord_individual_obj[:, 3]) = 0.0
339 histol_G_best_iter[iter, 3] = 0.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i, :] = [0. 1. 0. 1.]
344 cord_individual_obj[indivial_i, :] = [1. 1. 0. 1.]
345 cord_individual_obj[indivial_i, :] = [2. 0. 0. 0.]
346 cord_individual_obj[indivial_i, :] = [3. 1. 0. 1.]
347 cord_individual_obj[indivial_i, :] = [4. 1. 0. 1.]
348 cord_individual_obj[indivial_i, :] = [5. 1. 0. 1.]
349 cord_individual_obj[indivial_i, :] = [6. 0. 0. 0.]
350 cord_individual_obj[indivial_i, :] = [7. 1. 0. 1.]
351 cord_individual_obj[indivial_i, :] = [8. 0. 0. 0.]
352 cord_individual_obj[indivial_i, :] = [9. 0. 0. 0.]
353 cord_individual_obj[indivial_i, :] = [10. 0. 0. 0.]
354 cord_individual_obj[indivial_i, :] = [11. 0. 0. 0.]
355 cord_individual_obj[indivial_i, :] = [12. 0. 0. 0.]
356 cord_individual_obj[indivial_i, :] = [13. 0. 0. 0.]
357 cord_individual_obj[indivial_i, :] = [14. 1. 0. 1.]
358 cord_individual_obj[indivial_i, :] = [15. 0. 0. 0.]
359 cord_individual_obj[indivial_i, :] = [16. 0. 0. 0.]
360 cord_individual_obj[indivial_i, :] = [17. 0. 0. 0.]
361 cord_individual_obj[indivial_i, :] = [18. 1. 0. 1.]
362 cord_individual_obj[indivial_i, :] = [19. 0. 0. 0.]
363 cord_individual_obj[indivial_i, :] = [20. 0. 0. 0.]
364 cord_individual_obj[indivial_i, :] = [21. 1. 0. 1.]
365 cord_individual_obj[indivial_i, :] = [22. 1. 0. 1.]
366 cord_individual_obj[indivial_i, :] = [23. 1. 0. 1.]
367 cord_individual_obj[indivial_i, :] = [24. 0. 0. 0.]
368
369 min(cord_individual_obj[:, 3]) = 0.0
370 histol_G_best_iter[iter, 3] = 0.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i, :] = [0. 0. 0. 0.]
375 cord_individual_obj[indivial_i, :] = [1. 2. 0. 2.]
376 cord_individual_obj[indivial_i, :] = [2. 0. 0. 0.]
377 cord_individual_obj[indivial_i, :] = [3. 1. 0. 1.]
378 cord_individual_obj[indivial_i, :] = [4. 1. 0. 1.]
379 cord_individual_obj[indivial_i, :] = [5. 1. 0. 1.]
380 cord_individual_obj[indivial_i, :] = [6. 1. 0. 1.]
381 cord_individual_obj[indivial_i, :] = [7. 1. 0. 1.]
382 cord_individual_obj[indivial_i, :] = [8. 0. 0. 0.]
383 cord_individual_obj[indivial_i, :] = [9. 1. 0. 1.]
384 cord_individual_obj[indivial_i, :] = [10. 0. 0. 0.]
385 cord_individual_obj[indivial_i, :] = [11. 0. 0. 0.]
386 cord_individual_obj[indivial_i, :] = [12. 3. 0. 3.]
387 cord_individual_obj[indivial_i, :] = [13. 1. 0. 1.]
388 cord_individual_obj[indivial_i, :] = [14. 1. 0. 1.]
389 cord_individual_obj[indivial_i, :] = [15. 0. 0. 0.]
390 cord_individual_obj[indivial_i, :] = [16. 1. 0. 1.]
391 cord_individual_obj[indivial_i, :] = [17. 0. 0. 0.]
392 cord_individual_obj[indivial_i, :] = [18. 1. 0. 1.]
393 cord_individual_obj[indivial_i, :] = [19. 1. 0. 1.]
394 cord_individual_obj[indivial_i, :] = [20. 0. 0. 0.]
395 cord_individual_obj[indivial_i, :] = [21. 1. 0. 1.]
396 cord_individual_obj[indivial_i, :] = [22. 1. 0. 1.]
397 cord_individual_obj[indivial_i, :] = [23. 1. 0. 1.]
398 cord_individual_obj[indivial_i, :] = [24. 1. 0. 1.]
399
400 min(cord_individual_obj[:, 3]) = 0.0
401 histol_G_best_iter[iter, 3] = 0.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i, :] = [0. 1. 0. 1.]
406 cord_individual_obj[indivial_i, :] = [1. 1. 0. 1.]
407 cord_individual_obj[indivial_i, :] = [2. 0. 0. 0.]
408 cord_individual_obj[indivial_i, :] = [3. 1. 0. 1.]
409 cord_individual_obj[indivial_i, :] = [4. 1. 0. 1.]
410 cord_individual_obj[indivial_i, :] = [5. 2. 0. 2.]
411 cord_individual_obj[indivial_i, :] = [6. 1. 0. 1.]
412 cord_individual_obj[indivial_i, :] = [7. 1. 0. 1.]
413 cord_individual_obj[indivial_i, :] = [8. 0. 0. 0.]
414 cord_individual_obj[indivial_i, :] = [9. 0. 0. 0.]
415 cord_individual_obj[indivial_i, :] = [10. 0. 0. 0.]

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416 cord_individual_obj[indivial_i,:] = [11. 0. 0. 0.]
417 cord_individual_obj[indivial_i,:] = [12. 0. 0. 0.]
418 cord_individual_obj[indivial_i,:] = [13. 1. 0. 1.]
419 cord_individual_obj[indivial_i,:] = [14. 1. 0. 1.]
420 cord_individual_obj[indivial_i,:] = [15. 0. 0. 0.]
421 cord_individual_obj[indivial_i,:] = [16. 1. 0. 1.]
422 cord_individual_obj[indivial_i,:] = [17. 0. 0. 0.]
423 cord_individual_obj[indivial_i,:] = [18. 1. 0. 1.]
424 cord_individual_obj[indivial_i,:] = [19. 0. 0. 0.]
425 cord_individual_obj[indivial_i,:] = [20. 0. 0. 0.]
426 cord_individual_obj[indivial_i,:] = [21. 2. 0. 2.]
427 cord_individual_obj[indivial_i,:] = [22. 1. 0. 1.]
428 cord_individual_obj[indivial_i,:] = [23. 1. 0. 1.]
429 cord_individual_obj[indivial_i,:] = [24. 1. 0. 1.]
430
431 min(cord_individual_obj[:,3]) = 0.0
432 histol_G_best_iter[iter,3] = 0.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [0. 1. 0. 1.]
437 cord_individual_obj[indivial_i,:] = [1. 1. 0. 1.]
438 cord_individual_obj[indivial_i,:] = [2. 0. 0. 0.]
439 cord_individual_obj[indivial_i,:] = [3. 1. 0. 1.]
440 cord_individual_obj[indivial_i,:] = [4. 1. 0. 1.]
441 cord_individual_obj[indivial_i,:] = [5. 0. 0. 0.]
442 cord_individual_obj[indivial_i,:] = [6. 1. 0. 1.]
443 cord_individual_obj[indivial_i,:] = [7. 1. 0. 1.]
444 cord_individual_obj[indivial_i,:] = [8. 0. 0. 0.]
445 cord_individual_obj[indivial_i,:] = [9. 0. 0. 0.]
446 cord_individual_obj[indivial_i,:] = [10. 0. 0. 0.]
447 cord_individual_obj[indivial_i,:] = [11. 0. 0. 0.]
448 cord_individual_obj[indivial_i,:] = [12. 0. 0. 0.]
449 cord_individual_obj[indivial_i,:] = [13. 1. 0. 1.]
450 cord_individual_obj[indivial_i,:] = [14. 1. 0. 1.]
451 cord_individual_obj[indivial_i,:] = [15. 0. 0. 0.]
452 cord_individual_obj[indivial_i,:] = [16. 0. 0. 0.]
453 cord_individual_obj[indivial_i,:] = [17. 0. 0. 0.]
454 cord_individual_obj[indivial_i,:] = [18. 1. 0. 1.]
455 cord_individual_obj[indivial_i,:] = [19. 0. 0. 0.]
456 cord_individual_obj[indivial_i,:] = [20. 0. 0. 0.]
457 cord_individual_obj[indivial_i,:] = [21. 1. 0. 1.]
458 cord_individual_obj[indivial_i,:] = [22. 1. 0. 1.]
459 cord_individual_obj[indivial_i,:] = [23. 1. 0. 1.]
460 cord_individual_obj[indivial_i,:] = [24. 1. 0. 1.]
461
462 min(cord_individual_obj[:,3]) = 0.0
463 histol_G_best_iter[iter,3] = 0.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [0. 0. 0. 0.]
468 cord_individual_obj[indivial_i,:] = [1. 1. 0. 1.]
469 cord_individual_obj[indivial_i,:] = [2. 0. 0. 0.]
470 cord_individual_obj[indivial_i,:] = [3. 1. 0. 1.]
471 cord_individual_obj[indivial_i,:] = [4. 1. 0. 1.]
472 cord_individual_obj[indivial_i,:] = [5. 1. 0. 1.]
473 cord_individual_obj[indivial_i,:] = [6. 1. 0. 1.]
474 cord_individual_obj[indivial_i,:] = [7. 1. 0. 1.]
475 cord_individual_obj[indivial_i,:] = [8. 0. 0. 0.]
476 cord_individual_obj[indivial_i,:] = [9. 0. 0. 0.]
477 cord_individual_obj[indivial_i,:] = [10. 0. 0. 0.]
478 cord_individual_obj[indivial_i,:] = [11. 0. 0. 0.]
479 cord_individual_obj[indivial_i,:] = [12. 0. 0. 0.]
480 cord_individual_obj[indivial_i,:] = [13. 1. 0. 1.]
481 cord_individual_obj[indivial_i,:] = [14. 1. 0. 1.]
482 cord_individual_obj[indivial_i,:] = [15. 0. 0. 0.]
483 cord_individual_obj[indivial_i,:] = [16. 0. 0. 0.]
484 cord_individual_obj[indivial_i,:] = [17. 0. 0. 0.]
485 cord_individual_obj[indivial_i,:] = [18. 1. 0. 1.]
486 cord_individual_obj[indivial_i,:] = [19. 0. 0. 0.]
487 cord_individual_obj[indivial_i,:] = [20. 0. 0. 0.]
488 cord_individual_obj[indivial_i,:] = [21. 2. 0. 2.]
489 cord_individual_obj[indivial_i,:] = [22. 1. 0. 1.]
490 cord_individual_obj[indivial_i,:] = [23. 2. 0. 2.]
491 cord_individual_obj[indivial_i,:] = [24. 1. 0. 1.]
492
493 min(cord_individual_obj[:,3]) = 0.0
494 histol_G_best_iter[iter,3] = 0.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [0. 1. 0. 1.]
499 cord_individual_obj[indivial_i,:] = [1. 2. 0. 2.]

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500 cord_individual_obj[indivial_i,:] = [2. 0. 0. 0.]
501 cord_individual_obj[indivial_i,:] = [3. 1. 0. 1.]
502 cord_individual_obj[indivial_i,:] = [4. 1. 0. 1.]
503 cord_individual_obj[indivial_i,:] = [5. 1. 0. 1.]
504 cord_individual_obj[indivial_i,:] = [6. 1. 0. 1.]
505 cord_individual_obj[indivial_i,:] = [7. 2. 0. 2.]
506 cord_individual_obj[indivial_i,:] = [8. 0. 0. 0.]
507 cord_individual_obj[indivial_i,:] = [9. 0. 0. 0.]
508 cord_individual_obj[indivial_i,:] = [10. 0. 0. 0.]
509 cord_individual_obj[indivial_i,:] = [11. 0. 0. 0.]
510 cord_individual_obj[indivial_i,:] = [12. 2. 0. 2.]
511 cord_individual_obj[indivial_i,:] = [13. 1. 0. 1.]
512 cord_individual_obj[indivial_i,:] = [14. 1. 0. 1.]
513 cord_individual_obj[indivial_i,:] = [15. 0. 0. 0.]
514 cord_individual_obj[indivial_i,:] = [16. 1. 0. 1.]
515 cord_individual_obj[indivial_i,:] = [17. 0. 0. 0.]
516 cord_individual_obj[indivial_i,:] = [18. 2. 0. 2.]
517 cord_individual_obj[indivial_i,:] = [19. 1. 0. 1.]
518 cord_individual_obj[indivial_i,:] = [20. 0. 0. 0.]
519 cord_individual_obj[indivial_i,:] = [21. 0. 0. 0.]
520 cord_individual_obj[indivial_i,:] = [22. 1. 0. 1.]
521 cord_individual_obj[indivial_i,:] = [23. 1. 0. 1.]
522 cord_individual_obj[indivial_i,:] = [24. 1. 0. 1.]
523
524 min(cord_individual_obj[:, 3]) = 0.0
525 histol_G_best_iter[iter, 3] = 0.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i,:] = [0. 2. 0. 2.]
530 cord_individual_obj[indivial_i,:] = [1. 0. 0. 0.]
531 cord_individual_obj[indivial_i,:] = [2. 0. 0. 0.]
532 cord_individual_obj[indivial_i,:] = [3. 1. 0. 1.]
533 cord_individual_obj[indivial_i,:] = [4. 1. 0. 1.]
534 cord_individual_obj[indivial_i,:] = [5. 2. 0. 2.]
535 cord_individual_obj[indivial_i,:] = [6. 2. 0. 2.]
536 cord_individual_obj[indivial_i,:] = [7. 1. 0. 1.]
537 cord_individual_obj[indivial_i,:] = [8. 0. 0. 0.]
538 cord_individual_obj[indivial_i,:] = [9. 0. 0. 0.]
539 cord_individual_obj[indivial_i,:] = [10. 0. 0. 0.]
540 cord_individual_obj[indivial_i,:] = [11. 0. 0. 0.]
541 cord_individual_obj[indivial_i,:] = [12. 0. 0. 0.]
542 cord_individual_obj[indivial_i,:] = [13. 1. 0. 1.]
543 cord_individual_obj[indivial_i,:] = [14. 1. 0. 1.]
544 cord_individual_obj[indivial_i,:] = [15. 0. 0. 0.]
545 cord_individual_obj[indivial_i,:] = [16. 1. 0. 1.]
546 cord_individual_obj[indivial_i,:] = [17. 0. 0. 0.]
547 cord_individual_obj[indivial_i,:] = [18. 1. 0. 1.]
548 cord_individual_obj[indivial_i,:] = [19. 1. 0. 1.]
549 cord_individual_obj[indivial_i,:] = [20. 0. 0. 0.]
550 cord_individual_obj[indivial_i,:] = [21. 1. 0. 1.]
551 cord_individual_obj[indivial_i,:] = [22. 1. 0. 1.]
552 cord_individual_obj[indivial_i,:] = [23. 2. 0. 2.]
553 cord_individual_obj[indivial_i,:] = [24. 1. 0. 1.]
554
555 min(cord_individual_obj[:, 3]) = 0.0
556 histol_G_best_iter[iter, 3] = 0.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i,:] = [0. 0. 0. 0.]
561 cord_individual_obj[indivial_i,:] = [1. 1. 0. 1.]
562 cord_individual_obj[indivial_i,:] = [2. 0. 0. 0.]
563 cord_individual_obj[indivial_i,:] = [3. 0. 0. 0.]
564 cord_individual_obj[indivial_i,:] = [4. 0. 0. 0.]
565 cord_individual_obj[indivial_i,:] = [5. 1. 0. 1.]
566 cord_individual_obj[indivial_i,:] = [6. 3. 0. 3.]
567 cord_individual_obj[indivial_i,:] = [7. 1. 0. 1.]
568 cord_individual_obj[indivial_i,:] = [8. 0. 0. 0.]
569 cord_individual_obj[indivial_i,:] = [9. 0. 0. 0.]
570 cord_individual_obj[indivial_i,:] = [10. 0. 0. 0.]
571 cord_individual_obj[indivial_i,:] = [11. 0. 0. 0.]
572 cord_individual_obj[indivial_i,:] = [12. 0. 0. 0.]
573 cord_individual_obj[indivial_i,:] = [13. 0. 0. 0.]
574 cord_individual_obj[indivial_i,:] = [14. 0. 0. 0.]
575 cord_individual_obj[indivial_i,:] = [15. 0. 0. 0.]
576 cord_individual_obj[indivial_i,:] = [16. 0. 0. 0.]
577 cord_individual_obj[indivial_i,:] = [17. 0. 0. 0.]
578 cord_individual_obj[indivial_i,:] = [18. 1. 0. 1.]
579 cord_individual_obj[indivial_i,:] = [19. 0. 0. 0.]
580 cord_individual_obj[indivial_i,:] = [20. 0. 0. 0.]
581 cord_individual_obj[indivial_i,:] = [21. 1. 0. 1.]
582 cord_individual_obj[indivial_i,:] = [22. 0. 0. 0.]
583 cord_individual_obj[indivial_i,:] = [23. 1. 0. 1.]

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unknown

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584     cord_individual_obj[indivial_i, :] = [24. 0. 0. 0.]  
585  
586     min(cord_individual_obj[:, 3]) = 0.0  
587     historl_G_best_iter[iter, 3] = 0.0  
588 Begin iteration:  
589  
590 iter = 18  
591     cord_individual_obj[indivial_i, :] = [0. 1. 0. 1.]  
592     cord_individual_obj[indivial_i, :] = [1. 2. 0. 2.]  
593     cord_individual_obj[indivial_i, :] = [2. 0. 0. 0.]  
594     cord_individual_obj[indivial_i, :] = [3. 1. 0. 1.]  
595     cord_individual_obj[indivial_i, :] = [4. 1. 0. 1.]  
596     cord_individual_obj[indivial_i, :] = [5. 2. 0. 2.]  
597     cord_individual_obj[indivial_i, :] = [6. 0. 0. 0.]  
598     cord_individual_obj[indivial_i, :] = [7. 1. 0. 1.]  
599     cord_individual_obj[indivial_i, :] = [8. 0. 0. 0.]  
600     cord_individual_obj[indivial_i, :] = [9. 1. 0. 1.]  
601     cord_individual_obj[indivial_i, :] = [10. 0. 0. 0.]  
602     cord_individual_obj[indivial_i, :] = [11. 0. 0. 0.]  
603     cord_individual_obj[indivial_i, :] = [12. 1. 0. 1.]  
604     cord_individual_obj[indivial_i, :] = [13. 1. 0. 1.]  
605     cord_individual_obj[indivial_i, :] = [14. 1. 0. 1.]  
606     cord_individual_obj[indivial_i, :] = [15. 1. 0. 1.]  
607     cord_individual_obj[indivial_i, :] = [16. 1. 0. 1.]  
608     cord_individual_obj[indivial_i, :] = [17. 0. 0. 0.]  
609     cord_individual_obj[indivial_i, :] = [18. 1. 0. 1.]  
610     cord_individual_obj[indivial_i, :] = [19. 0. 0. 0.]  
611     cord_individual_obj[indivial_i, :] = [20. 0. 0. 0.]  
612     cord_individual_obj[indivial_i, :] = [21. 1. 0. 1.]  
613     cord_individual_obj[indivial_i, :] = [22. 1. 0. 1.]  
614     cord_individual_obj[indivial_i, :] = [23. 2. 0. 2.]  
615     cord_individual_obj[indivial_i, :] = [24. 1. 0. 1.]  
616  
617     min(cord_individual_obj[:, 3]) = 0.0  
618     historl_G_best_iter[iter, 3] = 0.0  
619 Begin iteration:  
620  
621 iter = 19  
622     cord_individual_obj[indivial_i, :] = [0. 1. 0. 1.]  
623     cord_individual_obj[indivial_i, :] = [1. 0. 0. 0.]  
624     cord_individual_obj[indivial_i, :] = [2. 0. 0. 0.]  
625     cord_individual_obj[indivial_i, :] = [3. 1. 0. 1.]  
626     cord_individual_obj[indivial_i, :] = [4. 1. 0. 1.]  
627     cord_individual_obj[indivial_i, :] = [5. 1. 0. 1.]  
628     cord_individual_obj[indivial_i, :] = [6. 1. 0. 1.]  
629     cord_individual_obj[indivial_i, :] = [7. 1. 0. 1.]  
630     cord_individual_obj[indivial_i, :] = [8. 0. 0. 0.]  
631     cord_individual_obj[indivial_i, :] = [9. 0. 0. 0.]  
632     cord_individual_obj[indivial_i, :] = [10. 0. 0. 0.]  
633     cord_individual_obj[indivial_i, :] = [11. 0. 0. 0.]  
634     cord_individual_obj[indivial_i, :] = [12. 0. 0. 0.]  
635     cord_individual_obj[indivial_i, :] = [13. 1. 0. 1.]  
636     cord_individual_obj[indivial_i, :] = [14. 1. 0. 1.]  
637     cord_individual_obj[indivial_i, :] = [15. 0. 0. 0.]  
638     cord_individual_obj[indivial_i, :] = [16. 0. 0. 0.]  
639     cord_individual_obj[indivial_i, :] = [17. 0. 0. 0.]  
640     cord_individual_obj[indivial_i, :] = [18. 1. 0. 1.]  
641     cord_individual_obj[indivial_i, :] = [19. 0. 0. 0.]  
642     cord_individual_obj[indivial_i, :] = [20. 0. 0. 0.]  
643     cord_individual_obj[indivial_i, :] = [21. 1. 0. 1.]  
644     cord_individual_obj[indivial_i, :] = [22. 1. 0. 1.]  
645     cord_individual_obj[indivial_i, :] = [23. 1. 0. 1.]  
646     cord_individual_obj[indivial_i, :] = [24. 1. 0. 1.]  
647  
648     min(cord_individual_obj[:, 3]) = 0.0  
649     historl_G_best_iter[iter, 3] = 0.0  
650 Begin iteration:  
651  
652 iter = 20  
653     cord_individual_obj[indivial_i, :] = [0. 0. 0. 0.]  
654     cord_individual_obj[indivial_i, :] = [1. 1. 0. 1.]  
655     cord_individual_obj[indivial_i, :] = [2. 0. 0. 0.]  
656     cord_individual_obj[indivial_i, :] = [3. 1. 0. 1.]  
657     cord_individual_obj[indivial_i, :] = [4. 1. 0. 1.]  
658     cord_individual_obj[indivial_i, :] = [5. 1. 0. 1.]  
659     cord_individual_obj[indivial_i, :] = [6. 3. 0. 3.]  
660     cord_individual_obj[indivial_i, :] = [7. 1. 0. 1.]  
661     cord_individual_obj[indivial_i, :] = [8. 0. 0. 0.]  
662     cord_individual_obj[indivial_i, :] = [9. 0. 0. 0.]  
663     cord_individual_obj[indivial_i, :] = [10. 0. 0. 0.]  
664     cord_individual_obj[indivial_i, :] = [11. 0. 0. 0.]  
665     cord_individual_obj[indivial_i, :] = [12. 3. 0. 3.]  
666     cord_individual_obj[indivial_i, :] = [13. 1. 0. 1.]  
667     cord_individual_obj[indivial_i, :] = [14. 1. 0. 1.]
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unknown

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668 cord_individual_obj[indivial_i, :] = [15. 0. 0. 0.]
669 cord_individual_obj[indivial_i, :] = [16. 1. 0. 1.]
670 cord_individual_obj[indivial_i, :] = [17. 0. 0. 0.]
671 cord_individual_obj[indivial_i, :] = [18. 2. 0. 2.]
672 cord_individual_obj[indivial_i, :] = [19. 1. 0. 1.]
673 cord_individual_obj[indivial_i, :] = [20. 0. 0. 0.]
674 cord_individual_obj[indivial_i, :] = [21. 1. 0. 1.]
675 cord_individual_obj[indivial_i, :] = [22. 1. 0. 1.]
676 cord_individual_obj[indivial_i, :] = [23. 2. 0. 2.]
677 cord_individual_obj[indivial_i, :] = [24. 1. 0. 1.]
678
679 min(cord_individual_obj[:, 3]) = 0.0
680 historl_G_best_iter[iter, 3] = 0.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 25.0
689 Proportion_of_area = 0.023148148148148147
690 BEST_CHROM =
691 berth: [ 4.5 12.5]
692 time: [0, 0.]
693 num_QC: [8. 5.]
694 Objective function values and some other indicators:
695 Obj0 = 0.00          Obj1 = 0.00          Obj0 + Obj1 = 0.00
696 Total movement of crane: 0.00
697 Total waiting time in berth position: 0.00
698 Total index of q during berthing: 76.00
699 Specific arrangement for each vessel:
700 V_id: 0           li: 9.0           xi: 4.5           bow of i: 0.0           tail of i: 9.0           gama_i0: 0.0           gama_i1: 0.0
701           gama_i1 + 1: 1.0           gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 140.0           work load_i: 0
702 140.0           work load gap_i: 0
703 V_id: 1           li: 7.0           xi: 12.5           bow of i: 9.0           tail of i: 16.0           gama_i0: 0.0           gama_i1: 0.0
704 .0           gama_i1 + 1: 1.0           gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 100.0           work
705 load_i: 100.0           work load gap_i: 0
706
707 Algorithm finished and the total CPU time: 58 s
708 End
709

```