

unknown

```

80 cord_individual_obj[indivial_i,:] = [ 16. 7. 101. 108.]
81 cord_individual_obj[indivial_i,:] = [ 17. 7. 108. 115.]
82 cord_individual_obj[indivial_i,:] = [ 18. 8. 137. 145.]
83 cord_individual_obj[indivial_i,:] = [19. 7. 84. 91.]
84 cord_individual_obj[indivial_i,:] = [20. 8. 83. 91.]
85 cord_individual_obj[indivial_i,:] = [21. 8. 55. 63.]
86 cord_individual_obj[indivial_i,:] = [22. 7. 115. 122.]
87 cord_individual_obj[indivial_i,:] = [23. 9. 99. 108.]
88 cord_individual_obj[indivial_i,:] = [24. 7. 112. 119.]
89
90 min(cord_individual_obj[:,3]) = 58.0
91 historl_G_best_iter[iter, 3] = 58.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 8. 92. 100.]
96 cord_individual_obj[indivial_i,:] = [ 1. 6. 41. 47.]
97 cord_individual_obj[indivial_i,:] = [ 2. 9. 65. 74.]
98 cord_individual_obj[indivial_i,:] = [ 3. 7. 51. 58.]
99 cord_individual_obj[indivial_i,:] = [ 4. 7. 102. 109.]
100 cord_individual_obj[indivial_i,:] = [ 5. 6. 77. 83.]
101 cord_individual_obj[indivial_i,:] = [ 6. 6. 43. 49.]
102 cord_individual_obj[indivial_i,:] = [ 7. 10. 79. 89.]
103 cord_individual_obj[indivial_i,:] = [ 8. 7. 56. 63.]
104 cord_individual_obj[indivial_i,:] = [ 9. 8. 86. 94.]
105 cord_individual_obj[indivial_i,:] = [10. 8. 71. 79.]
106 cord_individual_obj[indivial_i,:] = [11. 9. 71. 80.]
107 cord_individual_obj[indivial_i,:] = [12. 7. 110. 117.]
108 cord_individual_obj[indivial_i,:] = [13. 8. 98. 106.]
109 cord_individual_obj[indivial_i,:] = [14. 5. 76. 81.]
110 cord_individual_obj[indivial_i,:] = [15. 8. 109. 117.]
111 cord_individual_obj[indivial_i,:] = [16. 6. 40. 46.]
112 cord_individual_obj[indivial_i,:] = [17. 7. 77. 84.]
113 cord_individual_obj[indivial_i,:] = [18. 7. 67. 74.]
114 cord_individual_obj[indivial_i,:] = [19. 6. 87. 93.]
115 cord_individual_obj[indivial_i,:] = [20. 8. 95. 103.]
116 cord_individual_obj[indivial_i,:] = [21. 7. 88. 95.]
117 cord_individual_obj[indivial_i,:] = [22. 8. 102. 110.]
118 cord_individual_obj[indivial_i,:] = [23. 7. 89. 96.]
119 cord_individual_obj[indivial_i,:] = [24. 7. 75. 82.]
120
121 min(cord_individual_obj[:,3]) = 46.0
122 historl_G_best_iter[iter, 3] = 46.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 7. 73. 80.]
127 cord_individual_obj[indivial_i,:] = [ 1. 7. 89. 96.]
128 cord_individual_obj[indivial_i,:] = [ 2. 9. 93. 102.]
129 cord_individual_obj[indivial_i,:] = [ 3. 6. 95. 101.]
130 cord_individual_obj[indivial_i,:] = [ 4. 9. 76. 85.]
131 cord_individual_obj[indivial_i,:] = [ 5. 6. 154. 160.]
132 cord_individual_obj[indivial_i,:] = [ 6. 9. 119. 128.]
133 cord_individual_obj[indivial_i,:] = [ 7. 7. 128. 135.]
134 cord_individual_obj[indivial_i,:] = [ 8. 7. 43. 50.]
135 cord_individual_obj[indivial_i,:] = [ 9. 7. 55. 62.]
136 cord_individual_obj[indivial_i,:] = [10. 10. 138. 148.]
137 cord_individual_obj[indivial_i,:] = [11. 10. 94. 104.]
138 cord_individual_obj[indivial_i,:] = [12. 6. 40. 46.]
139 cord_individual_obj[indivial_i,:] = [13. 7. 147. 154.]
140 cord_individual_obj[indivial_i,:] = [14. 9. 82. 91.]
141 cord_individual_obj[indivial_i,:] = [15. 6. 70. 76.]
142 cord_individual_obj[indivial_i,:] = [16. 8. 115. 123.]
143 cord_individual_obj[indivial_i,:] = [17. 7. 97. 104.]
144 cord_individual_obj[indivial_i,:] = [18. 9. 99. 108.]
145 cord_individual_obj[indivial_i,:] = [19. 7. 84. 91.]
146 cord_individual_obj[indivial_i,:] = [20. 8. 127. 135.]
147 cord_individual_obj[indivial_i,:] = [21. 6. 89. 95.]
148 cord_individual_obj[indivial_i,:] = [22. 6. 88. 94.]
149 cord_individual_obj[indivial_i,:] = [23. 7. 53. 60.]
150 cord_individual_obj[indivial_i,:] = [24. 7. 95. 102.]
151
152 min(cord_individual_obj[:,3]) = 46.0
153 historl_G_best_iter[iter, 3] = 46.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 7. 111. 118.]
158 cord_individual_obj[indivial_i,:] = [ 1. 6. 67. 73.]
159 cord_individual_obj[indivial_i,:] = [ 2. 8. 90. 98.]
160 cord_individual_obj[indivial_i,:] = [ 3. 6. 77. 83.]
161 cord_individual_obj[indivial_i,:] = [ 4. 8. 68. 76.]
162 cord_individual_obj[indivial_i,:] = [ 5. 6. 40. 46.]
163 cord_individual_obj[indivial_i,:] = [ 6. 8. 147. 155.]

```

```

164 cord_individual_obj[indivial_i,:] = [ 7. 8. 104. 112.]
165 cord_individual_obj[indivial_i,:] = [ 8. 7. 121. 128.]
166 cord_individual_obj[indivial_i,:] = [ 9. 9. 107. 116.]
167 cord_individual_obj[indivial_i,:] = [10. 8. 58. 66.]
168 cord_individual_obj[indivial_i,:] = [11. 6. 68. 74.]
169 cord_individual_obj[indivial_i,:] = [12. 6. 52. 58.]
170 cord_individual_obj[indivial_i,:] = [13. 7. 116. 123.]
171 cord_individual_obj[indivial_i,:] = [14. 7. 66. 73.]
172 cord_individual_obj[indivial_i,:] = [15. 6. 100. 106.]
173 cord_individual_obj[indivial_i,:] = [16. 7. 114. 121.]
174 cord_individual_obj[indivial_i,:] = [17. 6. 71. 77.]
175 cord_individual_obj[indivial_i,:] = [18. 7. 145. 152.]
176 cord_individual_obj[indivial_i,:] = [19. 6. 55. 61.]
177 cord_individual_obj[indivial_i,:] = [20. 9. 80. 89.]
178 cord_individual_obj[indivial_i,:] = [21. 8. 94. 102.]
179 cord_individual_obj[indivial_i,:] = [22. 8. 85. 93.]
180 cord_individual_obj[indivial_i,:] = [23. 8. 97. 105.]
181 cord_individual_obj[indivial_i,:] = [24. 8. 125. 133.]
182
183 min(cord_individual_obj[:,3]) = 46.0
184 historl_G_best_iter[iter,3] = 46.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [ 0. 8. 36. 44.]
189 cord_individual_obj[indivial_i,:] = [ 1. 6. 139. 145.]
190 cord_individual_obj[indivial_i,:] = [ 2. 8. 46. 54.]
191 cord_individual_obj[indivial_i,:] = [ 3. 9. 89. 98.]
192 cord_individual_obj[indivial_i,:] = [ 4. 9. 123. 132.]
193 cord_individual_obj[indivial_i,:] = [ 5. 6. 103. 109.]
194 cord_individual_obj[indivial_i,:] = [ 6. 6. 40. 46.]
195 cord_individual_obj[indivial_i,:] = [ 7. 9. 68. 77.]
196 cord_individual_obj[indivial_i,:] = [ 8. 9. 87. 96.]
197 cord_individual_obj[indivial_i,:] = [ 9. 8. 105. 113.]
198 cord_individual_obj[indivial_i,:] = [10. 7. 66. 73.]
199 cord_individual_obj[indivial_i,:] = [11. 7. 84. 91.]
200 cord_individual_obj[indivial_i,:] = [12. 8. 63. 71.]
201 cord_individual_obj[indivial_i,:] = [13. 8. 51. 59.]
202 cord_individual_obj[indivial_i,:] = [14. 6. 98. 104.]
203 cord_individual_obj[indivial_i,:] = [15. 8. 130. 138.]
204 cord_individual_obj[indivial_i,:] = [16. 8. 76. 84.]
205 cord_individual_obj[indivial_i,:] = [17. 6. 72. 78.]
206 cord_individual_obj[indivial_i,:] = [18. 8. 113. 121.]
207 cord_individual_obj[indivial_i,:] = [19. 7. 102. 109.]
208 cord_individual_obj[indivial_i,:] = [20. 7. 118. 125.]
209 cord_individual_obj[indivial_i,:] = [21. 9. 58. 67.]
210 cord_individual_obj[indivial_i,:] = [22. 8. 112. 120.]
211 cord_individual_obj[indivial_i,:] = [23. 6. 53. 59.]
212 cord_individual_obj[indivial_i,:] = [24. 8. 99. 107.]
213
214 min(cord_individual_obj[:,3]) = 44.0
215 historl_G_best_iter[iter,3] = 44.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i,:] = [ 0. 6. 74. 80.]
220 cord_individual_obj[indivial_i,:] = [ 1. 8. 36. 44.]
221 cord_individual_obj[indivial_i,:] = [ 2. 8. 122. 130.]
222 cord_individual_obj[indivial_i,:] = [ 3. 8. 88. 96.]
223 cord_individual_obj[indivial_i,:] = [ 4. 9. 63. 72.]
224 cord_individual_obj[indivial_i,:] = [ 5. 7. 83. 90.]
225 cord_individual_obj[indivial_i,:] = [ 6. 8. 171. 179.]
226 cord_individual_obj[indivial_i,:] = [ 7. 8. 118. 126.]
227 cord_individual_obj[indivial_i,:] = [ 8. 8. 84. 92.]
228 cord_individual_obj[indivial_i,:] = [ 9. 7. 106. 113.]
229 cord_individual_obj[indivial_i,:] = [10. 7. 90. 97.]
230 cord_individual_obj[indivial_i,:] = [11. 8. 98. 106.]
231 cord_individual_obj[indivial_i,:] = [12. 7. 144. 151.]
232 cord_individual_obj[indivial_i,:] = [13. 7. 75. 82.]
233 cord_individual_obj[indivial_i,:] = [14. 8. 150. 158.]
234 cord_individual_obj[indivial_i,:] = [15. 9. 90. 99.]
235 cord_individual_obj[indivial_i,:] = [16. 7. 117. 124.]
236 cord_individual_obj[indivial_i,:] = [17. 8. 115. 123.]
237 cord_individual_obj[indivial_i,:] = [18. 5. 167. 172.]
238 cord_individual_obj[indivial_i,:] = [19. 8. 58. 66.]
239 cord_individual_obj[indivial_i,:] = [20. 6. 96. 102.]
240 cord_individual_obj[indivial_i,:] = [21. 6. 137. 143.]
241 cord_individual_obj[indivial_i,:] = [22. 7. 76. 83.]
242 cord_individual_obj[indivial_i,:] = [23. 6. 80. 86.]
243 cord_individual_obj[indivial_i,:] = [24. 8. 64. 72.]
244
245 min(cord_individual_obj[:,3]) = 44.0
246 historl_G_best_iter[iter,3] = 44.0
247 Begin iteration:

```

```

248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0.  7. 79. 86.]
251 cord_individual_obj[indivial_i, :] = [ 1.  7. 128. 135.]
252 cord_individual_obj[indivial_i, :] = [ 2.  9. 85. 94.]
253 cord_individual_obj[indivial_i, :] = [ 3.  6. 99. 105.]
254 cord_individual_obj[indivial_i, :] = [ 4.  9. 72. 81.]
255 cord_individual_obj[indivial_i, :] = [ 5.  6. 92. 98.]
256 cord_individual_obj[indivial_i, :] = [ 6.  8. 36. 44.]
257 cord_individual_obj[indivial_i, :] = [ 7.  8. 65. 73.]
258 cord_individual_obj[indivial_i, :] = [ 8.  6. 63. 69.]
259 cord_individual_obj[indivial_i, :] = [ 9.  6. 118. 124.]
260 cord_individual_obj[indivial_i, :] = [10.  6. 68. 74.]
261 cord_individual_obj[indivial_i, :] = [11.  9. 154. 163.]
262 cord_individual_obj[indivial_i, :] = [12.  7. 84. 91.]
263 cord_individual_obj[indivial_i, :] = [13.  7. 74. 81.]
264 cord_individual_obj[indivial_i, :] = [14.  8. 68. 76.]
265 cord_individual_obj[indivial_i, :] = [15.  6. 114. 120.]
266 cord_individual_obj[indivial_i, :] = [16.  7. 57. 64.]
267 cord_individual_obj[indivial_i, :] = [17.  8. 68. 76.]
268 cord_individual_obj[indivial_i, :] = [18.  7. 119. 126.]
269 cord_individual_obj[indivial_i, :] = [19.  7. 78. 85.]
270 cord_individual_obj[indivial_i, :] = [20.  8. 69. 77.]
271 cord_individual_obj[indivial_i, :] = [21.  7. 95. 102.]
272 cord_individual_obj[indivial_i, :] = [22.  8. 80. 88.]
273 cord_individual_obj[indivial_i, :] = [23.  6. 48. 54.]
274 cord_individual_obj[indivial_i, :] = [24.  8. 71. 79.]
275

276 min(cord_individual_obj[:, 3]) = 44.0
277 historl_G_best_iter[iter, 3] = 44.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0.  8. 92. 100.]
282 cord_individual_obj[indivial_i, :] = [ 1.  7. 118. 125.]
283 cord_individual_obj[indivial_i, :] = [ 2.  8. 76. 84.]
284 cord_individual_obj[indivial_i, :] = [ 3.  9. 66. 75.]
285 cord_individual_obj[indivial_i, :] = [ 4.  8. 61. 69.]
286 cord_individual_obj[indivial_i, :] = [ 5.  8. 135. 143.]
287 cord_individual_obj[indivial_i, :] = [ 6.  7. 74. 81.]
288 cord_individual_obj[indivial_i, :] = [ 7.  7. 51. 58.]
289 cord_individual_obj[indivial_i, :] = [ 8.  7. 77. 84.]
290 cord_individual_obj[indivial_i, :] = [ 9.  6. 86. 92.]
291 cord_individual_obj[indivial_i, :] = [10.  6. 135. 141.]
292 cord_individual_obj[indivial_i, :] = [11.  8. 36. 44.]
293 cord_individual_obj[indivial_i, :] = [12.  6. 139. 145.]
294 cord_individual_obj[indivial_i, :] = [13.  8. 83. 91.]
295 cord_individual_obj[indivial_i, :] = [14.  6. 51. 57.]
296 cord_individual_obj[indivial_i, :] = [15.  8. 102. 110.]
297 cord_individual_obj[indivial_i, :] = [16.  8. 71. 79.]
298 cord_individual_obj[indivial_i, :] = [17.  7. 85. 92.]
299 cord_individual_obj[indivial_i, :] = [18.  6. 106. 112.]
300 cord_individual_obj[indivial_i, :] = [19.  6. 92. 98.]
301 cord_individual_obj[indivial_i, :] = [20.  6. 53. 59.]
302 cord_individual_obj[indivial_i, :] = [21.  7. 89. 96.]
303 cord_individual_obj[indivial_i, :] = [22.  6. 76. 82.]
304 cord_individual_obj[indivial_i, :] = [23.  7. 75. 82.]
305 cord_individual_obj[indivial_i, :] = [24.  7. 91. 98.]
306

307 min(cord_individual_obj[:, 3]) = 44.0
308 historl_G_best_iter[iter, 3] = 44.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0.  7. 104. 111.]
313 cord_individual_obj[indivial_i, :] = [ 1.  8. 82. 90.]
314 cord_individual_obj[indivial_i, :] = [ 2.  8. 77. 85.]
315 cord_individual_obj[indivial_i, :] = [ 3.  7. 43. 50.]
316 cord_individual_obj[indivial_i, :] = [ 4.  8. 88. 96.]
317 cord_individual_obj[indivial_i, :] = [ 5.  7. 91. 98.]
318 cord_individual_obj[indivial_i, :] = [ 6.  10. 96. 106.]
319 cord_individual_obj[indivial_i, :] = [ 7.  8. 91. 99.]
320 cord_individual_obj[indivial_i, :] = [ 8.  6. 118. 124.]
321 cord_individual_obj[indivial_i, :] = [ 9.  8. 73. 81.]
322 cord_individual_obj[indivial_i, :] = [10.  9. 130. 139.]
323 cord_individual_obj[indivial_i, :] = [11.  7. 117. 124.]
324 cord_individual_obj[indivial_i, :] = [12.  8. 36. 44.]
325 cord_individual_obj[indivial_i, :] = [13.  7. 37. 44.]
326 cord_individual_obj[indivial_i, :] = [14.  7. 97. 104.]
327 cord_individual_obj[indivial_i, :] = [15.  7. 46. 53.]
328 cord_individual_obj[indivial_i, :] = [16.  7. 27. 34.]
329 cord_individual_obj[indivial_i, :] = [17.  9. 48. 57.]
330 cord_individual_obj[indivial_i, :] = [18.  7. 47. 54.]
331 cord_individual_obj[indivial_i, :] = [19.  7. 125. 132.]

```

```

332 cord_individual_obj[indivial_i, :] = [ 20.  8. 99. 107.]
333 cord_individual_obj[indivial_i, :] = [21.  8. 67. 75.]
334 cord_individual_obj[indivial_i, :] = [ 22.  8. 123. 131.]
335 cord_individual_obj[indivial_i, :] = [23.  6. 73. 79.]
336 cord_individual_obj[indivial_i, :] = [ 24.  6. 109. 115.]
337
338 min(cord_individual_obj[:, 3]) = 34.0
339 histol_G_best_iter[iter, 3] = 34.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i, :] = [ 0.  8. 79. 87.]
344 cord_individual_obj[indivial_i, :] = [ 1.  8. 82. 90.]
345 cord_individual_obj[indivial_i, :] = [ 2.  7. 48. 55.]
346 cord_individual_obj[indivial_i, :] = [ 3.  8. 112. 120.]
347 cord_individual_obj[indivial_i, :] = [ 4.  7. 66. 73.]
348 cord_individual_obj[indivial_i, :] = [ 5.  7. 84. 91.]
349 cord_individual_obj[indivial_i, :] = [ 6.  7. 103. 110.]
350 cord_individual_obj[indivial_i, :] = [ 7.  8. 112. 120.]
351 cord_individual_obj[indivial_i, :] = [ 8.  6. 60. 66.]
352 cord_individual_obj[indivial_i, :] = [ 9.  8. 113. 121.]
353 cord_individual_obj[indivial_i, :] = [10.  7. 27. 34.]
354 cord_individual_obj[indivial_i, :] = [11.  7. 75. 82.]
355 cord_individual_obj[indivial_i, :] = [12.  7. 66. 73.]
356 cord_individual_obj[indivial_i, :] = [13.  6. 85. 91.]
357 cord_individual_obj[indivial_i, :] = [14.  6. 63. 69.]
358 cord_individual_obj[indivial_i, :] = [15.  7. 42. 49.]
359 cord_individual_obj[indivial_i, :] = [16.  8. 102. 110.]
360 cord_individual_obj[indivial_i, :] = [17.  7. 62. 69.]
361 cord_individual_obj[indivial_i, :] = [18.  8. 94. 102.]
362 cord_individual_obj[indivial_i, :] = [19.  8. 60. 68.]
363 cord_individual_obj[indivial_i, :] = [20.  8. 99. 107.]
364 cord_individual_obj[indivial_i, :] = [21.  6. 80. 86.]
365 cord_individual_obj[indivial_i, :] = [22.  6. 87. 93.]
366 cord_individual_obj[indivial_i, :] = [23.  6. 94. 100.]
367 cord_individual_obj[indivial_i, :] = [24.  6. 97. 103.]
368
369 min(cord_individual_obj[:, 3]) = 34.0
370 histol_G_best_iter[iter, 3] = 34.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i, :] = [ 0.  7. 87. 94.]
375 cord_individual_obj[indivial_i, :] = [ 1.  8. 49. 57.]
376 cord_individual_obj[indivial_i, :] = [ 2.  8. 131. 139.]
377 cord_individual_obj[indivial_i, :] = [ 3.  9. 89. 98.]
378 cord_individual_obj[indivial_i, :] = [ 4.  8. 49. 57.]
379 cord_individual_obj[indivial_i, :] = [ 5.  7. 124. 131.]
380 cord_individual_obj[indivial_i, :] = [ 6.  8. 105. 113.]
381 cord_individual_obj[indivial_i, :] = [ 7.  9. 42. 51.]
382 cord_individual_obj[indivial_i, :] = [ 8.  8. 76. 84.]
383 cord_individual_obj[indivial_i, :] = [ 9.  7. 27. 34.]
384 cord_individual_obj[indivial_i, :] = [10.  6. 65. 71.]
385 cord_individual_obj[indivial_i, :] = [11.  7. 65. 72.]
386 cord_individual_obj[indivial_i, :] = [12.  7. 28. 35.]
387 cord_individual_obj[indivial_i, :] = [13.  7. 94. 101.]
388 cord_individual_obj[indivial_i, :] = [14.  6. 70. 76.]
389 cord_individual_obj[indivial_i, :] = [15.  6. 69. 75.]
390 cord_individual_obj[indivial_i, :] = [16.  8. 81. 89.]
391 cord_individual_obj[indivial_i, :] = [17.  7. 44. 51.]
392 cord_individual_obj[indivial_i, :] = [18.  7. 40. 47.]
393 cord_individual_obj[indivial_i, :] = [19.  7. 126. 133.]
394 cord_individual_obj[indivial_i, :] = [20.  8. 87. 95.]
395 cord_individual_obj[indivial_i, :] = [21.  7. 71. 78.]
396 cord_individual_obj[indivial_i, :] = [22.  7. 86. 93.]
397 cord_individual_obj[indivial_i, :] = [23.  7. 128. 135.]
398 cord_individual_obj[indivial_i, :] = [24.  5. 79. 84.]
399
400 min(cord_individual_obj[:, 3]) = 34.0
401 histol_G_best_iter[iter, 3] = 34.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i, :] = [ 0.  5. 70. 75.]
406 cord_individual_obj[indivial_i, :] = [ 1.  6. 60. 66.]
407 cord_individual_obj[indivial_i, :] = [ 2.  7. 27. 34.]
408 cord_individual_obj[indivial_i, :] = [ 3.  7. 120. 127.]
409 cord_individual_obj[indivial_i, :] = [ 4.  9. 65. 74.]
410 cord_individual_obj[indivial_i, :] = [ 5.  7. 66. 73.]
411 cord_individual_obj[indivial_i, :] = [ 6.  7. 95. 102.]
412 cord_individual_obj[indivial_i, :] = [ 7.  9. 63. 72.]
413 cord_individual_obj[indivial_i, :] = [ 8.  5. 47. 52.]
414 cord_individual_obj[indivial_i, :] = [ 9.  8. 85. 93.]
415 cord_individual_obj[indivial_i, :] = [10.  6. 62. 68.]

```

```

416 cord_individual_obj[indivial_i,:] = [11. 6. 68. 74.]
417 cord_individual_obj[indivial_i,:] = [12. 8. 57. 65.]
418 cord_individual_obj[indivial_i,:] = [13. 7. 99. 106.]
419 cord_individual_obj[indivial_i,:] = [14. 6. 58. 64.]
420 cord_individual_obj[indivial_i,:] = [15. 8. 53. 61.]
421 cord_individual_obj[indivial_i,:] = [16. 8. 133. 141.]
422 cord_individual_obj[indivial_i,:] = [17. 7. 76. 83.]
423 cord_individual_obj[indivial_i,:] = [18. 7. 116. 123.]
424 cord_individual_obj[indivial_i,:] = [19. 7. 72. 79.]
425 cord_individual_obj[indivial_i,:] = [20. 7. 55. 62.]
426 cord_individual_obj[indivial_i,:] = [21. 6. 91. 97.]
427 cord_individual_obj[indivial_i,:] = [22. 7. 88. 95.]
428 cord_individual_obj[indivial_i,:] = [23. 6. 70. 76.]
429 cord_individual_obj[indivial_i,:] = [24. 5. 78. 83.]
430
431 min(cord_individual_obj[:,3]) = 34.0
432 histol_G_best_iter[iter,3] = 34.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 6. 119. 125.]
437 cord_individual_obj[indivial_i,:] = [ 1. 7. 94. 101.]
438 cord_individual_obj[indivial_i,:] = [ 2. 7. 63. 70.]
439 cord_individual_obj[indivial_i,:] = [ 3. 8. 100. 108.]
440 cord_individual_obj[indivial_i,:] = [ 4. 8. 63. 71.]
441 cord_individual_obj[indivial_i,:] = [ 5. 8. 124. 132.]
442 cord_individual_obj[indivial_i,:] = [ 6. 7. 87. 94.]
443 cord_individual_obj[indivial_i,:] = [ 7. 8. 113. 121.]
444 cord_individual_obj[indivial_i,:] = [ 8. 7. 40. 47.]
445 cord_individual_obj[indivial_i,:] = [ 9. 8. 111. 119.]
446 cord_individual_obj[indivial_i,:] = [10. 7. 69. 76.]
447 cord_individual_obj[indivial_i,:] = [11. 6. 61. 67.]
448 cord_individual_obj[indivial_i,:] = [12. 8. 91. 99.]
449 cord_individual_obj[indivial_i,:] = [13. 7. 74. 81.]
450 cord_individual_obj[indivial_i,:] = [14. 6. 71. 77.]
451 cord_individual_obj[indivial_i,:] = [15. 6. 97. 103.]
452 cord_individual_obj[indivial_i,:] = [16. 7. 27. 34.]
453 cord_individual_obj[indivial_i,:] = [17. 7. 27. 34.]
454 cord_individual_obj[indivial_i,:] = [18. 7. 97. 104.]
455 cord_individual_obj[indivial_i,:] = [19. 6. 95. 101.]
456 cord_individual_obj[indivial_i,:] = [20. 6. 81. 87.]
457 cord_individual_obj[indivial_i,:] = [21. 7. 87. 94.]
458 cord_individual_obj[indivial_i,:] = [22. 6. 86. 92.]
459 cord_individual_obj[indivial_i,:] = [23. 7. 139. 146.]
460 cord_individual_obj[indivial_i,:] = [24. 6. 68. 74.]
461
462 min(cord_individual_obj[:,3]) = 34.0
463 histol_G_best_iter[iter,3] = 34.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 6. 76. 82.]
468 cord_individual_obj[indivial_i,:] = [ 1. 7. 59. 66.]
469 cord_individual_obj[indivial_i,:] = [ 2. 8. 63. 71.]
470 cord_individual_obj[indivial_i,:] = [ 3. 7. 107. 114.]
471 cord_individual_obj[indivial_i,:] = [ 4. 8. 64. 72.]
472 cord_individual_obj[indivial_i,:] = [ 5. 7. 127. 134.]
473 cord_individual_obj[indivial_i,:] = [ 6. 8. 82. 90.]
474 cord_individual_obj[indivial_i,:] = [ 7. 8. 115. 123.]
475 cord_individual_obj[indivial_i,:] = [ 8. 6. 76. 82.]
476 cord_individual_obj[indivial_i,:] = [ 9. 8. 108. 116.]
477 cord_individual_obj[indivial_i,:] = [10. 7. 47. 54.]
478 cord_individual_obj[indivial_i,:] = [11. 6. 71. 77.]
479 cord_individual_obj[indivial_i,:] = [12. 7. 43. 50.]
480 cord_individual_obj[indivial_i,:] = [13. 6. 55. 61.]
481 cord_individual_obj[indivial_i,:] = [14. 7. 51. 58.]
482 cord_individual_obj[indivial_i,:] = [15. 9. 42. 51.]
483 cord_individual_obj[indivial_i,:] = [16. 7. 82. 89.]
484 cord_individual_obj[indivial_i,:] = [17. 6. 50. 56.]
485 cord_individual_obj[indivial_i,:] = [18. 7. 90. 97.]
486 cord_individual_obj[indivial_i,:] = [19. 9. 105. 114.]
487 cord_individual_obj[indivial_i,:] = [20. 6. 75. 81.]
488 cord_individual_obj[indivial_i,:] = [21. 7. 115. 122.]
489 cord_individual_obj[indivial_i,:] = [22. 5. 116. 121.]
490 cord_individual_obj[indivial_i,:] = [23. 7. 27. 34.]
491 cord_individual_obj[indivial_i,:] = [24. 6. 100. 106.]
492
493 min(cord_individual_obj[:,3]) = 34.0
494 histol_G_best_iter[iter,3] = 34.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 6. 108. 114.]
499 cord_individual_obj[indivial_i,:] = [ 1. 7. 40. 47.]

```

```

500 cord_individual_obj[indivial_i,:] = [ 2. 8. 67. 75.]
501 cord_individual_obj[indivial_i,:] = [ 3. 8. 38. 46.]
502 cord_individual_obj[indivial_i,:] = [ 4. 7. 114. 121.]
503 cord_individual_obj[indivial_i,:] = [ 5. 7. 27. 34.]
504 cord_individual_obj[indivial_i,:] = [ 6. 7. 79. 86.]
505 cord_individual_obj[indivial_i,:] = [ 7. 8. 56. 64.]
506 cord_individual_obj[indivial_i,:] = [ 8. 6. 107. 113.]
507 cord_individual_obj[indivial_i,:] = [ 9. 9. 69. 78.]
508 cord_individual_obj[indivial_i,:] = [10. 7. 88. 95.]
509 cord_individual_obj[indivial_i,:] = [11. 8. 120. 128.]
510 cord_individual_obj[indivial_i,:] = [12. 6. 47. 53.]
511 cord_individual_obj[indivial_i,:] = [13. 7. 42. 49.]
512 cord_individual_obj[indivial_i,:] = [14. 8. 92. 100.]
513 cord_individual_obj[indivial_i,:] = [15. 7. 107. 114.]
514 cord_individual_obj[indivial_i,:] = [16. 7. 118. 125.]
515 cord_individual_obj[indivial_i,:] = [17. 10. 81. 91.]
516 cord_individual_obj[indivial_i,:] = [18. 7. 130. 137.]
517 cord_individual_obj[indivial_i,:] = [19. 8. 55. 63.]
518 cord_individual_obj[indivial_i,:] = [20. 7. 75. 82.]
519 cord_individual_obj[indivial_i,:] = [21. 7. 68. 75.]
520 cord_individual_obj[indivial_i,:] = [22. 7. 95. 102.]
521 cord_individual_obj[indivial_i,:] = [23. 6. 105. 111.]
522 cord_individual_obj[indivial_i,:] = [24. 5. 78. 83.]
523
524 min(cord_individual_obj[:, 3]) = 34.0
525 histol_G_best_iter[iter, 3] = 34.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i,:] = [ 0. 5. 114. 119.]
530 cord_individual_obj[indivial_i,:] = [ 1. 8. 92. 100.]
531 cord_individual_obj[indivial_i,:] = [ 2. 8. 87. 95.]
532 cord_individual_obj[indivial_i,:] = [ 3. 8. 77. 85.]
533 cord_individual_obj[indivial_i,:] = [ 4. 9. 89. 98.]
534 cord_individual_obj[indivial_i,:] = [ 5. 7. 103. 110.]
535 cord_individual_obj[indivial_i,:] = [ 6. 8. 63. 71.]
536 cord_individual_obj[indivial_i,:] = [ 7. 7. 85. 92.]
537 cord_individual_obj[indivial_i,:] = [ 8. 6. 83. 89.]
538 cord_individual_obj[indivial_i,:] = [ 9. 7. 107. 114.]
539 cord_individual_obj[indivial_i,:] = [10. 7. 65. 72.]
540 cord_individual_obj[indivial_i,:] = [11. 7. 55. 62.]
541 cord_individual_obj[indivial_i,:] = [12. 7. 67. 74.]
542 cord_individual_obj[indivial_i,:] = [13. 7. 63. 70.]
543 cord_individual_obj[indivial_i,:] = [14. 5. 136. 141.]
544 cord_individual_obj[indivial_i,:] = [15. 9. 109. 118.]
545 cord_individual_obj[indivial_i,:] = [16. 9. 90. 99.]
546 cord_individual_obj[indivial_i,:] = [17. 7. 35. 42.]
547 cord_individual_obj[indivial_i,:] = [18. 7. 27. 34.]
548 cord_individual_obj[indivial_i,:] = [19. 7. 100. 107.]
549 cord_individual_obj[indivial_i,:] = [20. 8. 72. 80.]
550 cord_individual_obj[indivial_i,:] = [21. 7. 69. 76.]
551 cord_individual_obj[indivial_i,:] = [22. 7. 134. 141.]
552 cord_individual_obj[indivial_i,:] = [23. 6. 86. 92.]
553 cord_individual_obj[indivial_i,:] = [24. 5. 149. 154.]
554
555 min(cord_individual_obj[:, 3]) = 34.0
556 histol_G_best_iter[iter, 3] = 34.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i,:] = [ 0. 6. 61. 67.]
561 cord_individual_obj[indivial_i,:] = [ 1. 7. 81. 88.]
562 cord_individual_obj[indivial_i,:] = [ 2. 10. 54. 64.]
563 cord_individual_obj[indivial_i,:] = [ 3. 9. 77. 86.]
564 cord_individual_obj[indivial_i,:] = [ 4. 8. 106. 114.]
565 cord_individual_obj[indivial_i,:] = [ 5. 6. 148. 154.]
566 cord_individual_obj[indivial_i,:] = [ 6. 8. 97. 105.]
567 cord_individual_obj[indivial_i,:] = [ 7. 7. 81. 88.]
568 cord_individual_obj[indivial_i,:] = [ 8. 7. 44. 51.]
569 cord_individual_obj[indivial_i,:] = [ 9. 8. 108. 116.]
570 cord_individual_obj[indivial_i,:] = [10. 7. 148. 155.]
571 cord_individual_obj[indivial_i,:] = [11. 8. 82. 90.]
572 cord_individual_obj[indivial_i,:] = [12. 6. 120. 126.]
573 cord_individual_obj[indivial_i,:] = [13. 7. 81. 88.]
574 cord_individual_obj[indivial_i,:] = [14. 7. 80. 87.]
575 cord_individual_obj[indivial_i,:] = [15. 8. 56. 64.]
576 cord_individual_obj[indivial_i,:] = [16. 7. 146. 153.]
577 cord_individual_obj[indivial_i,:] = [17. 8. 35. 43.]
578 cord_individual_obj[indivial_i,:] = [18. 6. 73. 79.]
579 cord_individual_obj[indivial_i,:] = [19. 7. 102. 109.]
580 cord_individual_obj[indivial_i,:] = [20. 6. 106. 112.]
581 cord_individual_obj[indivial_i,:] = [21. 6. 71. 77.]
582 cord_individual_obj[indivial_i,:] = [22. 6. 72. 78.]
583 cord_individual_obj[indivial_i,:] = [23. 7. 112. 119.]

```

unknown

```
584     cord_individual_obj[indivial_i, :] = [24. 7.27.34.]  
585  
586     min(cord_individual_obj[:, 3]) = 34.0  
587     historl_G_best_iter[iter, 3] = 34.0  
588 Begin iteration:  
589  
590 iter = 18  
591     cord_individual_obj[indivial_i, :] = [ 0. 6. 73. 79.]  
592     cord_individual_obj[indivial_i, :] = [ 1. 7. 67. 74.]  
593     cord_individual_obj[indivial_i, :] = [ 2. 8. 108. 116.]  
594     cord_individual_obj[indivial_i, :] = [ 3. 7. 69. 76.]  
595     cord_individual_obj[indivial_i, :] = [ 4. 7. 76. 83.]  
596     cord_individual_obj[indivial_i, :] = [ 5. 8. 74. 82.]  
597     cord_individual_obj[indivial_i, :] = [ 6. 9. 135. 144.]  
598     cord_individual_obj[indivial_i, :] = [ 7. 7. 60. 67.]  
599     cord_individual_obj[indivial_i, :] = [ 8. 6. 74. 80.]  
600     cord_individual_obj[indivial_i, :] = [ 9. 7. 87. 94.]  
601     cord_individual_obj[indivial_i, :] = [10. 7. 27. 34.]  
602     cord_individual_obj[indivial_i, :] = [11. 8. 64. 72.]  
603     cord_individual_obj[indivial_i, :] = [12. 7. 92. 99.]  
604     cord_individual_obj[indivial_i, :] = [13. 9. 68. 77.]  
605     cord_individual_obj[indivial_i, :] = [14. 7. 66. 73.]  
606     cord_individual_obj[indivial_i, :] = [15. 8. 66. 74.]  
607     cord_individual_obj[indivial_i, :] = [16. 11. 212. 223.]  
608     cord_individual_obj[indivial_i, :] = [17. 7. 57. 64.]  
609     cord_individual_obj[indivial_i, :] = [18. 7. 130. 137.]  
610     cord_individual_obj[indivial_i, :] = [19. 8. 119. 127.]  
611     cord_individual_obj[indivial_i, :] = [20. 7. 66. 73.]  
612     cord_individual_obj[indivial_i, :] = [21. 6. 72. 78.]  
613     cord_individual_obj[indivial_i, :] = [22. 7. 94. 101.]  
614     cord_individual_obj[indivial_i, :] = [23. 9. 87. 96.]  
615     cord_individual_obj[indivial_i, :] = [24. 6. 87. 93.]  
616  
617     min(cord_individual_obj[:, 3]) = 34.0  
618     historl_G_best_iter[iter, 3] = 34.0  
619 Begin iteration:  
620  
621 iter = 19  
622     cord_individual_obj[indivial_i, :] = [ 0. 8. 67. 75.]  
623     cord_individual_obj[indivial_i, :] = [ 1. 9. 58. 67.]  
624     cord_individual_obj[indivial_i, :] = [ 2. 6. 66. 72.]  
625     cord_individual_obj[indivial_i, :] = [ 3. 8. 114. 122.]  
626     cord_individual_obj[indivial_i, :] = [ 4. 7. 72. 79.]  
627     cord_individual_obj[indivial_i, :] = [ 5. 7. 83. 90.]  
628     cord_individual_obj[indivial_i, :] = [ 6. 8. 65. 73.]  
629     cord_individual_obj[indivial_i, :] = [ 7. 9. 108. 117.]  
630     cord_individual_obj[indivial_i, :] = [ 8. 9. 90. 99.]  
631     cord_individual_obj[indivial_i, :] = [ 9. 6. 60. 66.]  
632     cord_individual_obj[indivial_i, :] = [10. 6. 64. 70.]  
633     cord_individual_obj[indivial_i, :] = [11. 8. 79. 87.]  
634     cord_individual_obj[indivial_i, :] = [12. 7. 122. 129.]  
635     cord_individual_obj[indivial_i, :] = [13. 7. 95. 102.]  
636     cord_individual_obj[indivial_i, :] = [14. 9. 67. 76.]  
637     cord_individual_obj[indivial_i, :] = [15. 7. 73. 80.]  
638     cord_individual_obj[indivial_i, :] = [16. 7. 27. 34.]  
639     cord_individual_obj[indivial_i, :] = [17. 8. 66. 74.]  
640     cord_individual_obj[indivial_i, :] = [18. 8. 161. 169.]  
641     cord_individual_obj[indivial_i, :] = [19. 9. 54. 63.]  
642     cord_individual_obj[indivial_i, :] = [20. 8. 82. 90.]  
643     cord_individual_obj[indivial_i, :] = [21. 7. 79. 86.]  
644     cord_individual_obj[indivial_i, :] = [22. 8. 54. 62.]  
645     cord_individual_obj[indivial_i, :] = [23. 7. 60. 67.]  
646     cord_individual_obj[indivial_i, :] = [24. 7. 95. 102.]  
647  
648     min(cord_individual_obj[:, 3]) = 34.0  
649     historl_G_best_iter[iter, 3] = 34.0  
650 Begin iteration:  
651  
652 iter = 20  
653     cord_individual_obj[indivial_i, :] = [ 0. 7. 95. 102.]  
654     cord_individual_obj[indivial_i, :] = [ 1. 7. 87. 94.]  
655     cord_individual_obj[indivial_i, :] = [ 2. 7. 50. 57.]  
656     cord_individual_obj[indivial_i, :] = [ 3. 8. 73. 81.]  
657     cord_individual_obj[indivial_i, :] = [ 4. 8. 66. 74.]  
658     cord_individual_obj[indivial_i, :] = [ 5. 6. 107. 113.]  
659     cord_individual_obj[indivial_i, :] = [ 6. 9. 91. 100.]  
660     cord_individual_obj[indivial_i, :] = [ 7. 10. 73. 83.]  
661     cord_individual_obj[indivial_i, :] = [ 8. 7. 86. 93.]  
662     cord_individual_obj[indivial_i, :] = [ 9. 8. 95. 103.]  
663     cord_individual_obj[indivial_i, :] = [10. 9. 114. 123.]  
664     cord_individual_obj[indivial_i, :] = [11. 8. 123. 131.]  
665     cord_individual_obj[indivial_i, :] = [12. 8. 57. 65.]  
666     cord_individual_obj[indivial_i, :] = [13. 6. 73. 79.]  
667     cord_individual_obj[indivial_i, :] = [14. 8. 70. 78.]
```

unknown

```

668 cord_individual_obj[individual_i,:] = [15. 6. 57. 63.]
669 cord_individual_obj[individual_i,:] = [16. 7. 83. 90.]
670 cord_individual_obj[individual_i,:] = [17. 8. 47. 55.]
671 cord_individual_obj[individual_i,:] = [18. 7. 27. 34.]
672 cord_individual_obj[individual_i,:] = [19. 8. 136. 144.]
673 cord_individual_obj[individual_i,:] = [20. 7. 137. 144.]
674 cord_individual_obj[individual_i,:] = [21. 6. 98. 104.]
675 cord_individual_obj[individual_i,:] = [22. 7. 74. 81.]
676 cord_individual_obj[individual_i,:] = [23. 8. 51. 59.]
677 cord_individual_obj[individual_i,:] = [24. 7. 80. 87.]
678
679 min(cord_individual_obj[:, 3]) = 34.0
680 historl_G_best_iter[iter, 3] = 34.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 156.0
689 Proportion_of_area = 0.14444444444444443
690 BEST_CHROM =
691 berth: [13. 24. 8. 16. 2. 9.5 24. 1.5 3.5 3.5 9. 15.5 23. ]
692 time: [2. 4. 5. 3. 4. 3. 2. 1. 3. 0. 0. 0. 0.]
693 num_QC: [3. 2. 4. 6. 2. 2. 2. 3. 6. 3. 2. 6. 3.]
694 Objective function values and some other indicators:
695 Obj0 = 7.00 Obj1 = 27.00 Obj0 + Obj1 = 34.00
696 Total movement of crane: 0.00
697 Total waiting time in berth position: 27.00
698 Total index of q during berthing: 701.00
699 Specific arrangement for each vessel:
700 . V_id: 0 li: 4.0 xi: 13.0 bow of i: 11.0 tail of i: 15.0 gama_i0: 2.0 gama_i1: 2.0
    .0 gama_i1 + 1: 3.0 gama_i1 - gama_i0: 0.0 duration_time_i: 1.0 demand_i: 60.0 work
load_i: 60.0 work load gap_i: 0
701 . V_id: 1 li: 8.0 xi: 24.0 bow of i: 20.0 tail of i: 28.0 gama_i0: 4.0 gama_i1: 7.0
    .0 gama_i1 + 1: 8.0 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
702 . V_id: 2 li: 8.0 xi: 8.0 bow of i: 4.0 tail of i: 12.0 gama_i0: 5.0 gama_i1: 6.0
    .0 gama_i1 + 1: 7.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 120.0 work
load_i: 120.0 work load gap_i: 0
703 . V_id: 3 li: 8.0 xi: 16.0 bow of i: 12.0 tail of i: 20.0 gama_i0: 3.0 gama_i1: 4.0
    .0 gama_i1 + 1: 5.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 160.0 work
load_i: 160.0 work load gap_i: 0
704 . V_id: 4 li: 4.0 xi: 2.0 bow of i: 0.0 tail of i: 4.0 gama_i0: 4.0 gama_i1: 7.0
    .0 gama_i1 + 1: 8.0 gama_i1 - gama_i0: 3.0 duration_time_i: 4.0 demand_i: 160.0 work
load_i: 160.0 work load gap_i: 0
705 . V_id: 5 li: 5.0 xi: 9.5 bow of i: 7.0 tail of i: 12.0 gama_i0: 3.0 gama_i1: 4.0
    .0 gama_i1 + 1: 5.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 80.0 work
load_i: 80.0 work load gap_i: 0
706 . V_id: 6 li: 8.0 xi: 24.0 bow of i: 20.0 tail of i: 28.0 gama_i0: 2.0 gama_i1: 3.0
    .0 gama_i1 + 1: 4.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 80.0 work
load_i: 80.0 work load gap_i: 0
707 . V_id: 7 li: 3.0 xi: 1.5 bow of i: 0.0 tail of i: 3.0 gama_i0: 1.0 gama_i1: 2.0
    .0 gama_i1 + 1: 3.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 100.0 work
load_i: 100.0 work load gap_i: 0
708 . V_id: 8 li: 7.0 xi: 3.5 bow of i: 0.0 tail of i: 7.0 gama_i0: 3.0 gama_i1: 3.0
    .0 gama_i1 + 1: 4.0 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
709 . V_id: 9 li: 7.0 xi: 3.5 bow of i: 0.0 tail of i: 7.0 gama_i0: 0.0 gama_i1: 0.0
    .0 gama_i1 + 1: 1.0 gama_i1 - gama_i0: 0.0 duration_time_i: 1.0 demand_i: 60.0 work
load_i: 60.0 work load gap_i: 0
710 . V_id: 10 li: 4.0 xi: 9.0 bow of i: 7.0 tail of i: 11.0 gama_i0: 0.0 gama_i1: 2.0
    .0 gama_i1 + 1: 3.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 120.0 work
load_i: 120.0 work load gap_i: 0
711 . V_id: 11 li: 9.0 xi: 15.5 bow of i: 11.0 tail of i: 20.0 gama_i0: 0.0 gama_i1: 1.0
    .0 gama_i1 + 1: 2.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 140.0 work
load_i: 140.0 work load gap_i: 0
712 . V_id: 12 li: 6.0 xi: 23.0 bow of i: 20.0 tail of i: 26.0 gama_i0: 0.0 gama_i1: 0.0
    .0 gama_i1 + 1: 2.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 100.0 work
load_i: 100.0 work load gap_i: 0
713
714 Algorithm finished and the total CPU time: 366 s
715 End
716

```