

unknown

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80 cord_individual_obj[indivial_i,:] = [16. 8. 85. 93.]
81 cord_individual_obj[indivial_i,:] = [17. 8. 142. 150.]
82 cord_individual_obj[indivial_i,:] = [18. 8. 103. 111.]
83 cord_individual_obj[indivial_i,:] = [19. 9. 109. 118.]
84 cord_individual_obj[indivial_i,:] = [20. 9. 114. 123.]
85 cord_individual_obj[indivial_i,:] = [21. 7. 117. 124.]
86 cord_individual_obj[indivial_i,:] = [22. 8. 77. 85.]
87 cord_individual_obj[indivial_i,:] = [23. 8. 116. 124.]
88 cord_individual_obj[indivial_i,:] = [24. 8. 155. 163.]
89
90 min(cord_individual_obj[:,3]) = 60.0
91 historl_G_best_iter[iter,3] = 60.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 7. 125. 132.]
96 cord_individual_obj[indivial_i,:] = [ 1. 8. 129. 137.]
97 cord_individual_obj[indivial_i,:] = [ 2. 9. 71. 80.]
98 cord_individual_obj[indivial_i,:] = [ 3. 10. 147. 157.]
99 cord_individual_obj[indivial_i,:] = [ 4. 7. 114. 121.]
100 cord_individual_obj[indivial_i,:] = [ 5. 6. 132. 138.]
101 cord_individual_obj[indivial_i,:] = [ 6. 10. 120. 130.]
102 cord_individual_obj[indivial_i,:] = [ 7. 9. 153. 162.]
103 cord_individual_obj[indivial_i,:] = [ 8. 7. 84. 91.]
104 cord_individual_obj[indivial_i,:] = [ 9. 8. 98. 106.]
105 cord_individual_obj[indivial_i,:] = [10. 10. 116. 126.]
106 cord_individual_obj[indivial_i,:] = [11. 9. 82. 91.]
107 cord_individual_obj[indivial_i,:] = [12. 8. 130. 138.]
108 cord_individual_obj[indivial_i,:] = [13. 9. 137. 146.]
109 cord_individual_obj[indivial_i,:] = [14. 7. 53. 60.]
110 cord_individual_obj[indivial_i,:] = [15. 10. 105. 115.]
111 cord_individual_obj[indivial_i,:] = [16. 8. 119. 127.]
112 cord_individual_obj[indivial_i,:] = [17. 8. 119. 127.]
113 cord_individual_obj[indivial_i,:] = [18. 7. 136. 143.]
114 cord_individual_obj[indivial_i,:] = [19. 10. 127. 137.]
115 cord_individual_obj[indivial_i,:] = [20. 7. 145. 152.]
116 cord_individual_obj[indivial_i,:] = [21. 8. 130. 138.]
117 cord_individual_obj[indivial_i,:] = [22. 8. 112. 120.]
118 cord_individual_obj[indivial_i,:] = [23. 8. 114. 122.]
119 cord_individual_obj[indivial_i,:] = [24. 7. 90. 97.]
120
121 min(cord_individual_obj[:,3]) = 60.0
122 historl_G_best_iter[iter,3] = 60.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 9. 137. 146.]
127 cord_individual_obj[indivial_i,:] = [ 1. 7. 137. 144.]
128 cord_individual_obj[indivial_i,:] = [ 2. 8. 106. 114.]
129 cord_individual_obj[indivial_i,:] = [ 3. 9. 160. 169.]
130 cord_individual_obj[indivial_i,:] = [ 4. 8. 59. 67.]
131 cord_individual_obj[indivial_i,:] = [ 5. 8. 168. 176.]
132 cord_individual_obj[indivial_i,:] = [ 6. 9. 108. 117.]
133 cord_individual_obj[indivial_i,:] = [ 7. 7. 53. 60.]
134 cord_individual_obj[indivial_i,:] = [ 8. 8. 57. 65.]
135 cord_individual_obj[indivial_i,:] = [ 9. 6. 106. 112.]
136 cord_individual_obj[indivial_i,:] = [10. 9. 84. 93.]
137 cord_individual_obj[indivial_i,:] = [11. 8. 67. 75.]
138 cord_individual_obj[indivial_i,:] = [12. 8. 77. 85.]
139 cord_individual_obj[indivial_i,:] = [13. 7. 77. 84.]
140 cord_individual_obj[indivial_i,:] = [14. 9. 74. 83.]
141 cord_individual_obj[indivial_i,:] = [15. 8. 133. 141.]
142 cord_individual_obj[indivial_i,:] = [16. 10. 86. 96.]
143 cord_individual_obj[indivial_i,:] = [17. 9. 86. 95.]
144 cord_individual_obj[indivial_i,:] = [18. 7. 138. 145.]
145 cord_individual_obj[indivial_i,:] = [19. 9. 152. 161.]
146 cord_individual_obj[indivial_i,:] = [20. 9. 123. 132.]
147 cord_individual_obj[indivial_i,:] = [21. 9. 129. 138.]
148 cord_individual_obj[indivial_i,:] = [22. 10. 117. 127.]
149 cord_individual_obj[indivial_i,:] = [23. 10. 131. 141.]
150 cord_individual_obj[indivial_i,:] = [24. 7. 92. 99.]
151
152 min(cord_individual_obj[:,3]) = 60.0
153 historl_G_best_iter[iter,3] = 60.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 8. 110. 118.]
158 cord_individual_obj[indivial_i,:] = [ 1. 7. 135. 142.]
159 cord_individual_obj[indivial_i,:] = [ 2. 9. 71. 80.]
160 cord_individual_obj[indivial_i,:] = [ 3. 9. 149. 158.]
161 cord_individual_obj[indivial_i,:] = [ 4. 9. 127. 136.]
162 cord_individual_obj[indivial_i,:] = [ 5. 7. 53. 60.]
163 cord_individual_obj[indivial_i,:] = [ 6. 8. 107. 115.]

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164 cord_individual_obj[indivial_i, :] = [ 7. 8. 92. 100.]
165 cord_individual_obj[indivial_i, :] = [ 8. 7. 68. 75.]
166 cord_individual_obj[indivial_i, :] = [ 9. 9. 100. 109.]
167 cord_individual_obj[indivial_i, :] = [ 10. 10. 116. 126.]
168 cord_individual_obj[indivial_i, :] = [ 11. 7. 137. 144.]
169 cord_individual_obj[indivial_i, :] = [ 12. 7. 161. 168.]
170 cord_individual_obj[indivial_i, :] = [ 13. 9. 119. 128.]
171 cord_individual_obj[indivial_i, :] = [ 14. 7. 115. 122.]
172 cord_individual_obj[indivial_i, :] = [ 15. 8. 126. 134.]
173 cord_individual_obj[indivial_i, :] = [ 16. 11. 116. 127.]
174 cord_individual_obj[indivial_i, :] = [ 17. 8. 114. 122.]
175 cord_individual_obj[indivial_i, :] = [ 18. 7. 76. 83.]
176 cord_individual_obj[indivial_i, :] = [ 19. 9. 106. 115.]
177 cord_individual_obj[indivial_i, :] = [ 20. 7. 111. 118.]
178 cord_individual_obj[indivial_i, :] = [ 21. 7. 166. 173.]
179 cord_individual_obj[indivial_i, :] = [ 22. 8. 117. 125.]
180 cord_individual_obj[indivial_i, :] = [ 23. 8. 110. 118.]
181 cord_individual_obj[indivial_i, :] = [ 24. 8. 107. 115.]
182
183 min(cord_individual_obj[:, 3]) = 60.0
184 historl_G_best_iter[iter, 3] = 60.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i, :] = [ 0. 7. 80. 87.]
189 cord_individual_obj[indivial_i, :] = [ 1. 9. 85. 94.]
190 cord_individual_obj[indivial_i, :] = [ 2. 11. 119. 130.]
191 cord_individual_obj[indivial_i, :] = [ 3. 8. 117. 125.]
192 cord_individual_obj[indivial_i, :] = [ 4. 6. 96. 102.]
193 cord_individual_obj[indivial_i, :] = [ 5. 9. 134. 143.]
194 cord_individual_obj[indivial_i, :] = [ 6. 7. 113. 120.]
195 cord_individual_obj[indivial_i, :] = [ 7. 8. 76. 84.]
196 cord_individual_obj[indivial_i, :] = [ 8. 9. 101. 110.]
197 cord_individual_obj[indivial_i, :] = [ 9. 7. 124. 131.]
198 cord_individual_obj[indivial_i, :] = [ 10. 9. 145. 154.]
199 cord_individual_obj[indivial_i, :] = [ 11. 7. 62. 69.]
200 cord_individual_obj[indivial_i, :] = [ 12. 8. 120. 128.]
201 cord_individual_obj[indivial_i, :] = [ 13. 8. 142. 150.]
202 cord_individual_obj[indivial_i, :] = [ 14. 11. 189. 200.]
203 cord_individual_obj[indivial_i, :] = [ 15. 11. 187. 198.]
204 cord_individual_obj[indivial_i, :] = [ 16. 8. 131. 139.]
205 cord_individual_obj[indivial_i, :] = [ 17. 7. 130. 137.]
206 cord_individual_obj[indivial_i, :] = [ 18. 7. 79. 86.]
207 cord_individual_obj[indivial_i, :] = [ 19. 8. 79. 87.]
208 cord_individual_obj[indivial_i, :] = [ 20. 9. 90. 99.]
209 cord_individual_obj[indivial_i, :] = [ 21. 7. 53. 60.]
210 cord_individual_obj[indivial_i, :] = [ 22. 8. 117. 125.]
211 cord_individual_obj[indivial_i, :] = [ 23. 10. 106. 116.]
212 cord_individual_obj[indivial_i, :] = [ 24. 9. 66. 75.]
213
214 min(cord_individual_obj[:, 3]) = 60.0
215 historl_G_best_iter[iter, 3] = 60.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i, :] = [ 0. 8. 112. 120.]
220 cord_individual_obj[indivial_i, :] = [ 1. 8. 144. 152.]
221 cord_individual_obj[indivial_i, :] = [ 2. 8. 123. 131.]
222 cord_individual_obj[indivial_i, :] = [ 3. 9. 82. 91.]
223 cord_individual_obj[indivial_i, :] = [ 4. 6. 130. 136.]
224 cord_individual_obj[indivial_i, :] = [ 5. 7. 113. 120.]
225 cord_individual_obj[indivial_i, :] = [ 6. 9. 124. 133.]
226 cord_individual_obj[indivial_i, :] = [ 7. 7. 93. 100.]
227 cord_individual_obj[indivial_i, :] = [ 8. 11. 104. 115.]
228 cord_individual_obj[indivial_i, :] = [ 9. 9. 126. 135.]
229 cord_individual_obj[indivial_i, :] = [ 10. 7. 104. 111.]
230 cord_individual_obj[indivial_i, :] = [ 11. 8. 140. 148.]
231 cord_individual_obj[indivial_i, :] = [ 12. 7. 109. 116.]
232 cord_individual_obj[indivial_i, :] = [ 13. 9. 88. 97.]
233 cord_individual_obj[indivial_i, :] = [ 14. 7. 53. 60.]
234 cord_individual_obj[indivial_i, :] = [ 15. 8. 114. 122.]
235 cord_individual_obj[indivial_i, :] = [ 16. 7. 99. 106.]
236 cord_individual_obj[indivial_i, :] = [ 17. 9. 69. 78.]
237 cord_individual_obj[indivial_i, :] = [ 18. 7. 106. 113.]
238 cord_individual_obj[indivial_i, :] = [ 19. 8. 122. 130.]
239 cord_individual_obj[indivial_i, :] = [ 20. 8. 100. 108.]
240 cord_individual_obj[indivial_i, :] = [ 21. 7. 117. 124.]
241 cord_individual_obj[indivial_i, :] = [ 22. 9. 118. 127.]
242 cord_individual_obj[indivial_i, :] = [ 23. 8. 94. 102.]
243 cord_individual_obj[indivial_i, :] = [ 24. 8. 86. 94.]
244
245 min(cord_individual_obj[:, 3]) = 60.0
246 historl_G_best_iter[iter, 3] = 60.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0.  9. 189. 198.]
251 cord_individual_obj[indivial_i, :] = [ 1.  7. 53. 60.]
252 cord_individual_obj[indivial_i, :] = [ 2.  9. 116. 125.]
253 cord_individual_obj[indivial_i, :] = [ 3.  7. 124. 131.]
254 cord_individual_obj[indivial_i, :] = [ 4.  7. 93. 100.]
255 cord_individual_obj[indivial_i, :] = [ 5.  9. 84. 93.]
256 cord_individual_obj[indivial_i, :] = [ 6.  6. 76. 82.]
257 cord_individual_obj[indivial_i, :] = [ 7.  8. 144. 152.]
258 cord_individual_obj[indivial_i, :] = [ 8.  7. 98. 105.]
259 cord_individual_obj[indivial_i, :] = [ 9.  8. 109. 117.]
260 cord_individual_obj[indivial_i, :] = [10.  8. 110. 118.]
261 cord_individual_obj[indivial_i, :] = [11.  8. 69. 77.]
262 cord_individual_obj[indivial_i, :] = [12.  7. 195. 202.]
263 cord_individual_obj[indivial_i, :] = [13.  9. 85. 94.]
264 cord_individual_obj[indivial_i, :] = [14.  9. 74. 83.]
265 cord_individual_obj[indivial_i, :] = [15.  7. 117. 124.]
266 cord_individual_obj[indivial_i, :] = [16.  8. 94. 102.]
267 cord_individual_obj[indivial_i, :] = [17.  9. 139. 148.]
268 cord_individual_obj[indivial_i, :] = [18.  8. 101. 109.]
269 cord_individual_obj[indivial_i, :] = [19.  11. 106. 117.]
270 cord_individual_obj[indivial_i, :] = [20.  8. 90. 98.]
271 cord_individual_obj[indivial_i, :] = [21.  6. 72. 78.]
272 cord_individual_obj[indivial_i, :] = [22.  8. 94. 102.]
273 cord_individual_obj[indivial_i, :] = [23.  7. 60. 67.]
274 cord_individual_obj[indivial_i, :] = [24.  7. 104. 111.]
275

276 min(cord_individual_obj[:, 3]) = 60.0
277 historl_G_best_iter[iter, 3] = 60.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0.  8. 134. 142.]
282 cord_individual_obj[indivial_i, :] = [ 1.  7. 133. 140.]
283 cord_individual_obj[indivial_i, :] = [ 2.  8. 81. 89.]
284 cord_individual_obj[indivial_i, :] = [ 3.  9. 159. 168.]
285 cord_individual_obj[indivial_i, :] = [ 4.  8. 70. 78.]
286 cord_individual_obj[indivial_i, :] = [ 5.  8. 109. 117.]
287 cord_individual_obj[indivial_i, :] = [ 6.  8. 81. 89.]
288 cord_individual_obj[indivial_i, :] = [ 7.  8. 89. 97.]
289 cord_individual_obj[indivial_i, :] = [ 8.  9. 79. 88.]
290 cord_individual_obj[indivial_i, :] = [ 9.  9. 117. 126.]
291 cord_individual_obj[indivial_i, :] = [10.  9. 97. 106.]
292 cord_individual_obj[indivial_i, :] = [11.  8. 47. 55.]
293 cord_individual_obj[indivial_i, :] = [12.  7. 53. 60.]
294 cord_individual_obj[indivial_i, :] = [13.  7. 162. 169.]
295 cord_individual_obj[indivial_i, :] = [14.  9. 159. 168.]
296 cord_individual_obj[indivial_i, :] = [15.  9. 77. 86.]
297 cord_individual_obj[indivial_i, :] = [16.  7. 114. 121.]
298 cord_individual_obj[indivial_i, :] = [17.  9. 138. 147.]
299 cord_individual_obj[indivial_i, :] = [18.  8. 124. 132.]
300 cord_individual_obj[indivial_i, :] = [19.  10. 143. 153.]
301 cord_individual_obj[indivial_i, :] = [20.  9. 107. 116.]
302 cord_individual_obj[indivial_i, :] = [21.  8. 85. 93.]
303 cord_individual_obj[indivial_i, :] = [22.  7. 51. 58.]
304 cord_individual_obj[indivial_i, :] = [23.  9. 127. 136.]
305 cord_individual_obj[indivial_i, :] = [24.  9. 55. 64.]
306

307 min(cord_individual_obj[:, 3]) = 55.0
308 historl_G_best_iter[iter, 3] = 55.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0.  9. 138. 147.]
313 cord_individual_obj[indivial_i, :] = [ 1.  9. 98. 107.]
314 cord_individual_obj[indivial_i, :] = [ 2.  9. 69. 78.]
315 cord_individual_obj[indivial_i, :] = [ 3.  6. 110. 116.]
316 cord_individual_obj[indivial_i, :] = [ 4.  7. 118. 125.]
317 cord_individual_obj[indivial_i, :] = [ 5.  9. 230. 239.]
318 cord_individual_obj[indivial_i, :] = [ 6.  8. 78. 86.]
319 cord_individual_obj[indivial_i, :] = [ 7.  8. 125. 133.]
320 cord_individual_obj[indivial_i, :] = [ 8.  9. 118. 127.]
321 cord_individual_obj[indivial_i, :] = [ 9.  8. 142. 150.]
322 cord_individual_obj[indivial_i, :] = [10.  8. 93. 101.]
323 cord_individual_obj[indivial_i, :] = [11.  8. 46. 54.]
324 cord_individual_obj[indivial_i, :] = [12.  9. 65. 74.]
325 cord_individual_obj[indivial_i, :] = [13.  8. 47. 55.]
326 cord_individual_obj[indivial_i, :] = [14.  8. 71. 79.]
327 cord_individual_obj[indivial_i, :] = [15.  7. 94. 101.]
328 cord_individual_obj[indivial_i, :] = [16.  8. 174. 182.]
329 cord_individual_obj[indivial_i, :] = [17.  7. 127. 134.]
330 cord_individual_obj[indivial_i, :] = [18.  9. 109. 118.]
331 cord_individual_obj[indivial_i, :] = [19.  10. 132. 142.]

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332 cord_individual_obj[indivial_i, :] = [20. 9. 67. 76.]
333 cord_individual_obj[indivial_i, :] = [21. 6. 77. 83.]
334 cord_individual_obj[indivial_i, :] = [22. 8. 123. 131.]
335 cord_individual_obj[indivial_i, :] = [23. 8. 148. 156.]
336 cord_individual_obj[indivial_i, :] = [24. 9. 95. 104.]
337
338 min(cord_individual_obj[:, 3]) = 54.0
339 histol_G_best_iter[iter, 3] = 54.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i, :] = [ 0. 9. 111. 120.]
344 cord_individual_obj[indivial_i, :] = [ 1. 10. 108. 118.]
345 cord_individual_obj[indivial_i, :] = [ 2. 10. 120. 130.]
346 cord_individual_obj[indivial_i, :] = [ 3. 7. 161. 168.]
347 cord_individual_obj[indivial_i, :] = [ 4. 10. 117. 127.]
348 cord_individual_obj[indivial_i, :] = [ 5. 8. 46. 54.]
349 cord_individual_obj[indivial_i, :] = [ 6. 7. 93. 100.]
350 cord_individual_obj[indivial_i, :] = [ 7. 7. 126. 133.]
351 cord_individual_obj[indivial_i, :] = [ 8. 8. 84. 92.]
352 cord_individual_obj[indivial_i, :] = [ 9. 7. 117. 124.]
353 cord_individual_obj[indivial_i, :] = [10. 7. 114. 121.]
354 cord_individual_obj[indivial_i, :] = [11. 6. 81. 87.]
355 cord_individual_obj[indivial_i, :] = [12. 7. 92. 99.]
356 cord_individual_obj[indivial_i, :] = [13. 7. 67. 74.]
357 cord_individual_obj[indivial_i, :] = [14. 8. 113. 121.]
358 cord_individual_obj[indivial_i, :] = [15. 8. 126. 134.]
359 cord_individual_obj[indivial_i, :] = [16. 7. 103. 110.]
360 cord_individual_obj[indivial_i, :] = [17. 8. 98. 106.]
361 cord_individual_obj[indivial_i, :] = [18. 8. 136. 144.]
362 cord_individual_obj[indivial_i, :] = [19. 9. 71. 80.]
363 cord_individual_obj[indivial_i, :] = [20. 9. 121. 130.]
364 cord_individual_obj[indivial_i, :] = [21. 6. 75. 81.]
365 cord_individual_obj[indivial_i, :] = [22. 8. 82. 90.]
366 cord_individual_obj[indivial_i, :] = [23. 7. 99. 106.]
367 cord_individual_obj[indivial_i, :] = [24. 9. 89. 98.]
368
369 min(cord_individual_obj[:, 3]) = 54.0
370 histol_G_best_iter[iter, 3] = 54.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i, :] = [ 0. 9. 128. 137.]
375 cord_individual_obj[indivial_i, :] = [ 1. 9. 147. 156.]
376 cord_individual_obj[indivial_i, :] = [ 2. 9. 140. 149.]
377 cord_individual_obj[indivial_i, :] = [ 3. 8. 46. 54.]
378 cord_individual_obj[indivial_i, :] = [ 4. 8. 98. 106.]
379 cord_individual_obj[indivial_i, :] = [ 5. 9. 84. 93.]
380 cord_individual_obj[indivial_i, :] = [ 6. 9. 180. 189.]
381 cord_individual_obj[indivial_i, :] = [ 7. 6. 119. 125.]
382 cord_individual_obj[indivial_i, :] = [ 8. 7. 112. 119.]
383 cord_individual_obj[indivial_i, :] = [ 9. 7. 87. 94.]
384 cord_individual_obj[indivial_i, :] = [10. 7. 160. 167.]
385 cord_individual_obj[indivial_i, :] = [11. 8. 68. 76.]
386 cord_individual_obj[indivial_i, :] = [12. 8. 135. 143.]
387 cord_individual_obj[indivial_i, :] = [13. 7. 105. 112.]
388 cord_individual_obj[indivial_i, :] = [14. 8. 70. 78.]
389 cord_individual_obj[indivial_i, :] = [15. 8. 163. 171.]
390 cord_individual_obj[indivial_i, :] = [16. 8. 151. 159.]
391 cord_individual_obj[indivial_i, :] = [17. 7. 106. 113.]
392 cord_individual_obj[indivial_i, :] = [18. 6. 88. 94.]
393 cord_individual_obj[indivial_i, :] = [19. 7. 145. 152.]
394 cord_individual_obj[indivial_i, :] = [20. 7. 99. 106.]
395 cord_individual_obj[indivial_i, :] = [21. 7. 101. 108.]
396 cord_individual_obj[indivial_i, :] = [22. 6. 150. 156.]
397 cord_individual_obj[indivial_i, :] = [23. 9. 91. 100.]
398 cord_individual_obj[indivial_i, :] = [24. 7. 134. 141.]
399
400 min(cord_individual_obj[:, 3]) = 54.0
401 histol_G_best_iter[iter, 3] = 54.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i, :] = [ 0. 9. 122. 131.]
406 cord_individual_obj[indivial_i, :] = [ 1. 7. 113. 120.]
407 cord_individual_obj[indivial_i, :] = [ 2. 9. 135. 144.]
408 cord_individual_obj[indivial_i, :] = [ 3. 6. 98. 104.]
409 cord_individual_obj[indivial_i, :] = [ 4. 7. 95. 102.]
410 cord_individual_obj[indivial_i, :] = [ 5. 8. 99. 107.]
411 cord_individual_obj[indivial_i, :] = [ 6. 8. 46. 54.]
412 cord_individual_obj[indivial_i, :] = [ 7. 7. 143. 150.]
413 cord_individual_obj[indivial_i, :] = [ 8. 9. 78. 87.]
414 cord_individual_obj[indivial_i, :] = [ 9. 6. 111. 117.]
415 cord_individual_obj[indivial_i, :] = [10. 7. 142. 149.]

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416 cord_individual_obj[indivial_i,:] = [ 11.  6. 96. 102.]
417 cord_individual_obj[indivial_i,:] = [ 12.  8. 110. 118.]
418 cord_individual_obj[indivial_i,:] = [ 13.  8. 98. 106.]
419 cord_individual_obj[indivial_i,:] = [14.  9. 66. 75.]
420 cord_individual_obj[indivial_i,:] = [ 15.  7. 145. 152.]
421 cord_individual_obj[indivial_i,:] = [ 16.  7. 120. 127.]
422 cord_individual_obj[indivial_i,:] = [ 17.  7. 162. 169.]
423 cord_individual_obj[indivial_i,:] = [ 18.  7. 157. 164.]
424 cord_individual_obj[indivial_i,:] = [19.  8. 80. 88.]
425 cord_individual_obj[indivial_i,:] = [20.  8. 82. 90.]
426 cord_individual_obj[indivial_i,:] = [21.  8. 67. 75.]
427 cord_individual_obj[indivial_i,:] = [22.  7. 117. 124.]
428 cord_individual_obj[indivial_i,:] = [23.  8. 85. 93.]
429 cord_individual_obj[indivial_i,:] = [24.  9. 77. 86.]
430
431 min(cord_individual_obj[:,3]) = 54.0
432 histol_G_best_iter[iter,3] = 54.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0.  8. 81. 89.]
437 cord_individual_obj[indivial_i,:] = [ 1.  9. 134. 143.]
438 cord_individual_obj[indivial_i,:] = [ 2. 10. 79. 89.]
439 cord_individual_obj[indivial_i,:] = [ 3. 10. 133. 143.]
440 cord_individual_obj[indivial_i,:] = [ 4. 7. 77. 84.]
441 cord_individual_obj[indivial_i,:] = [ 5. 7. 127. 134.]
442 cord_individual_obj[indivial_i,:] = [ 6. 8. 137. 145.]
443 cord_individual_obj[indivial_i,:] = [ 7. 7. 96. 103.]
444 cord_individual_obj[indivial_i,:] = [ 8. 7. 82. 89.]
445 cord_individual_obj[indivial_i,:] = [ 9. 7. 108. 115.]
446 cord_individual_obj[indivial_i,:] = [10. 6. 115. 121.]
447 cord_individual_obj[indivial_i,:] = [11. 10. 100. 110.]
448 cord_individual_obj[indivial_i,:] = [12. 7. 142. 149.]
449 cord_individual_obj[indivial_i,:] = [13. 8. 69. 77.]
450 cord_individual_obj[indivial_i,:] = [14. 9. 104. 113.]
451 cord_individual_obj[indivial_i,:] = [15. 7. 150. 157.]
452 cord_individual_obj[indivial_i,:] = [16. 8. 120. 128.]
453 cord_individual_obj[indivial_i,:] = [17. 8. 46. 54.]
454 cord_individual_obj[indivial_i,:] = [18. 7. 123. 130.]
455 cord_individual_obj[indivial_i,:] = [19. 7. 85. 92.]
456 cord_individual_obj[indivial_i,:] = [20. 8. 63. 71.]
457 cord_individual_obj[indivial_i,:] = [21. 9. 120. 129.]
458 cord_individual_obj[indivial_i,:] = [22. 8. 87. 95.]
459 cord_individual_obj[indivial_i,:] = [23. 8. 137. 145.]
460 cord_individual_obj[indivial_i,:] = [24. 8. 91. 99.]
461
462 min(cord_individual_obj[:,3]) = 54.0
463 histol_G_best_iter[iter,3] = 54.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0.  8. 143. 151.]
468 cord_individual_obj[indivial_i,:] = [ 1. 8. 100. 108.]
469 cord_individual_obj[indivial_i,:] = [ 2. 9. 102. 111.]
470 cord_individual_obj[indivial_i,:] = [ 3. 8. 69. 77.]
471 cord_individual_obj[indivial_i,:] = [ 4. 7. 65. 72.]
472 cord_individual_obj[indivial_i,:] = [ 5. 8. 77. 85.]
473 cord_individual_obj[indivial_i,:] = [ 6. 8. 140. 148.]
474 cord_individual_obj[indivial_i,:] = [ 7. 6. 115. 121.]
475 cord_individual_obj[indivial_i,:] = [ 8. 8. 108. 116.]
476 cord_individual_obj[indivial_i,:] = [ 9. 7. 81. 88.]
477 cord_individual_obj[indivial_i,:] = [10. 10. 142. 152.]
478 cord_individual_obj[indivial_i,:] = [11. 6. 110. 116.]
479 cord_individual_obj[indivial_i,:] = [12. 7. 110. 117.]
480 cord_individual_obj[indivial_i,:] = [13. 7. 119. 126.]
481 cord_individual_obj[indivial_i,:] = [14. 9. 106. 115.]
482 cord_individual_obj[indivial_i,:] = [15. 8. 46. 54.]
483 cord_individual_obj[indivial_i,:] = [16. 9. 129. 138.]
484 cord_individual_obj[indivial_i,:] = [17. 7. 145. 152.]
485 cord_individual_obj[indivial_i,:] = [18. 8. 108. 116.]
486 cord_individual_obj[indivial_i,:] = [19. 8. 130. 138.]
487 cord_individual_obj[indivial_i,:] = [20. 9. 130. 139.]
488 cord_individual_obj[indivial_i,:] = [21. 6. 73. 79.]
489 cord_individual_obj[indivial_i,:] = [22. 9. 165. 174.]
490 cord_individual_obj[indivial_i,:] = [23. 8. 102. 110.]
491 cord_individual_obj[indivial_i,:] = [24. 10. 90. 100.]
492
493 min(cord_individual_obj[:,3]) = 54.0
494 histol_G_best_iter[iter,3] = 54.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0.  8. 71. 79.]
499 cord_individual_obj[indivial_i,:] = [ 1. 9. 109. 118.]

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500 cord_individual_obj[indivial_i,:] = [ 2. 8. 113. 121.]
501 cord_individual_obj[indivial_i,:] = [ 3. 9. 112. 121.]
502 cord_individual_obj[indivial_i,:] = [ 4. 7. 95. 102.]
503 cord_individual_obj[indivial_i,:] = [ 5. 8. 94. 102.]
504 cord_individual_obj[indivial_i,:] = [ 6. 6. 82. 88.]
505 cord_individual_obj[indivial_i,:] = [ 7. 8. 101. 109.]
506 cord_individual_obj[indivial_i,:] = [ 8. 8. 77. 85.]
507 cord_individual_obj[indivial_i,:] = [ 9. 7. 128. 135.]
508 cord_individual_obj[indivial_i,:] = [10. 8. 61. 69.]
509 cord_individual_obj[indivial_i,:] = [11. 9. 92. 101.]
510 cord_individual_obj[indivial_i,:] = [12. 8. 120. 128.]
511 cord_individual_obj[indivial_i,:] = [13. 9. 93. 102.]
512 cord_individual_obj[indivial_i,:] = [14. 7. 96. 103.]
513 cord_individual_obj[indivial_i,:] = [15. 7. 143. 150.]
514 cord_individual_obj[indivial_i,:] = [16. 9. 72. 81.]
515 cord_individual_obj[indivial_i,:] = [17. 8. 127. 135.]
516 cord_individual_obj[indivial_i,:] = [18. 8. 153. 161.]
517 cord_individual_obj[indivial_i,:] = [19. 8. 104. 112.]
518 cord_individual_obj[indivial_i,:] = [20. 8. 55. 63.]
519 cord_individual_obj[indivial_i,:] = [21. 7. 63. 70.]
520 cord_individual_obj[indivial_i,:] = [22. 8. 46. 54.]
521 cord_individual_obj[indivial_i,:] = [23. 7. 118. 125.]
522 cord_individual_obj[indivial_i,:] = [24. 9. 116. 125.]
523
524 min(cord_individual_obj[:, 3]) = 54.0
525 histol_G_best_iter[iter, 3] = 54.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i,:] = [ 0. 8. 141. 149.]
530 cord_individual_obj[indivial_i,:] = [ 1. 9. 60. 69.]
531 cord_individual_obj[indivial_i,:] = [ 2. 8. 62. 70.]
532 cord_individual_obj[indivial_i,:] = [ 3. 9. 167. 176.]
533 cord_individual_obj[indivial_i,:] = [ 4. 7. 115. 122.]
534 cord_individual_obj[indivial_i,:] = [ 5. 8. 101. 109.]
535 cord_individual_obj[indivial_i,:] = [ 6. 9. 96. 105.]
536 cord_individual_obj[indivial_i,:] = [ 7. 7. 127. 134.]
537 cord_individual_obj[indivial_i,:] = [ 8. 7. 121. 128.]
538 cord_individual_obj[indivial_i,:] = [ 9. 7. 111. 118.]
539 cord_individual_obj[indivial_i,:] = [10. 6. 96. 102.]
540 cord_individual_obj[indivial_i,:] = [11. 7. 127. 134.]
541 cord_individual_obj[indivial_i,:] = [12. 8. 138. 146.]
542 cord_individual_obj[indivial_i,:] = [13. 8. 66. 74.]
543 cord_individual_obj[indivial_i,:] = [14. 8. 82. 90.]
544 cord_individual_obj[indivial_i,:] = [15. 7. 112. 119.]
545 cord_individual_obj[indivial_i,:] = [16. 10. 66. 76.]
546 cord_individual_obj[indivial_i,:] = [17. 9. 83. 92.]
547 cord_individual_obj[indivial_i,:] = [18. 8. 46. 54.]
548 cord_individual_obj[indivial_i,:] = [19. 10. 59. 69.]
549 cord_individual_obj[indivial_i,:] = [20. 8. 53. 61.]
550 cord_individual_obj[indivial_i,:] = [21. 6. 79. 85.]
551 cord_individual_obj[indivial_i,:] = [22. 8. 66. 74.]
552 cord_individual_obj[indivial_i,:] = [23. 9. 165. 174.]
553 cord_individual_obj[indivial_i,:] = [24. 9. 75. 84.]
554
555 min(cord_individual_obj[:, 3]) = 54.0
556 histol_G_best_iter[iter, 3] = 54.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i,:] = [ 0. 8. 127. 135.]
561 cord_individual_obj[indivial_i,:] = [ 1. 9. 101. 110.]
562 cord_individual_obj[indivial_i,:] = [ 2. 9. 57. 66.]
563 cord_individual_obj[indivial_i,:] = [ 3. 8. 46. 54.]
564 cord_individual_obj[indivial_i,:] = [ 4. 8. 118. 126.]
565 cord_individual_obj[indivial_i,:] = [ 5. 8. 66. 74.]
566 cord_individual_obj[indivial_i,:] = [ 6. 8. 108. 116.]
567 cord_individual_obj[indivial_i,:] = [ 7. 8. 149. 157.]
568 cord_individual_obj[indivial_i,:] = [ 8. 8. 89. 97.]
569 cord_individual_obj[indivial_i,:] = [ 9. 9. 135. 144.]
570 cord_individual_obj[indivial_i,:] = [10. 9. 155. 164.]
571 cord_individual_obj[indivial_i,:] = [11. 9. 179. 188.]
572 cord_individual_obj[indivial_i,:] = [12. 8. 141. 149.]
573 cord_individual_obj[indivial_i,:] = [13. 9. 70. 79.]
574 cord_individual_obj[indivial_i,:] = [14. 8. 79. 87.]
575 cord_individual_obj[indivial_i,:] = [15. 9. 81. 90.]
576 cord_individual_obj[indivial_i,:] = [16. 5. 153. 158.]
577 cord_individual_obj[indivial_i,:] = [17. 7. 126. 133.]
578 cord_individual_obj[indivial_i,:] = [18. 6. 91. 97.]
579 cord_individual_obj[indivial_i,:] = [19. 8. 81. 89.]
580 cord_individual_obj[indivial_i,:] = [20. 8. 106. 114.]
581 cord_individual_obj[indivial_i,:] = [21. 7. 55. 62.]
582 cord_individual_obj[indivial_i,:] = [22. 7. 110. 117.]
583 cord_individual_obj[indivial_i,:] = [23. 10. 131. 141.]

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unknown

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584     cord_individual_obj[indivial_i, :] = [ 24.  8. 115. 123.]
585
586     min(cord_individual_obj[:, 3]) = 54.0
587     historl_G_best_iter[iter, 3] = 54.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [ 0.  7. 171. 178.]
592     cord_individual_obj[indivial_i, :] = [ 1.  8. 93. 101.]
593     cord_individual_obj[indivial_i, :] = [ 2.  9. 120. 129.]
594     cord_individual_obj[indivial_i, :] = [ 3.  7. 101. 108.]
595     cord_individual_obj[indivial_i, :] = [ 4.  7. 67. 74.]
596     cord_individual_obj[indivial_i, :] = [ 5.  8. 51. 59.]
597     cord_individual_obj[indivial_i, :] = [ 6.  8. 65. 73.]
598     cord_individual_obj[indivial_i, :] = [ 7.  7. 105. 112.]
599     cord_individual_obj[indivial_i, :] = [ 8.  8. 101. 109.]
600     cord_individual_obj[indivial_i, :] = [ 9.  7. 99. 106.]
601     cord_individual_obj[indivial_i, :] = [ 10. 9. 176. 185.]
602     cord_individual_obj[indivial_i, :] = [ 11. 8. 46. 54.]
603     cord_individual_obj[indivial_i, :] = [ 12. 7. 101. 108.]
604     cord_individual_obj[indivial_i, :] = [ 13. 8. 129. 137.]
605     cord_individual_obj[indivial_i, :] = [ 14. 8. 128. 136.]
606     cord_individual_obj[indivial_i, :] = [ 15. 7. 105. 112.]
607     cord_individual_obj[indivial_i, :] = [ 16. 8. 120. 128.]
608     cord_individual_obj[indivial_i, :] = [ 17. 7. 140. 147.]
609     cord_individual_obj[indivial_i, :] = [ 18. 8. 129. 137.]
610     cord_individual_obj[indivial_i, :] = [ 19. 8. 112. 120.]
611     cord_individual_obj[indivial_i, :] = [ 20. 10. 67. 77.]
612     cord_individual_obj[indivial_i, :] = [ 21. 7. 80. 87.]
613     cord_individual_obj[indivial_i, :] = [ 22. 7. 165. 172.]
614     cord_individual_obj[indivial_i, :] = [ 23. 8. 113. 121.]
615     cord_individual_obj[indivial_i, :] = [ 24. 8. 133. 141.]
616
617     min(cord_individual_obj[:, 3]) = 54.0
618     historl_G_best_iter[iter, 3] = 54.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0. 10. 153. 163.]
623     cord_individual_obj[indivial_i, :] = [ 1. 8. 116. 124.]
624     cord_individual_obj[indivial_i, :] = [ 2. 7. 84. 91.]
625     cord_individual_obj[indivial_i, :] = [ 3. 9. 108. 117.]
626     cord_individual_obj[indivial_i, :] = [ 4. 6. 108. 114.]
627     cord_individual_obj[indivial_i, :] = [ 5. 8. 82. 90.]
628     cord_individual_obj[indivial_i, :] = [ 6. 8. 75. 83.]
629     cord_individual_obj[indivial_i, :] = [ 7. 6. 137. 143.]
630     cord_individual_obj[indivial_i, :] = [ 8. 7. 70. 77.]
631     cord_individual_obj[indivial_i, :] = [ 9. 7. 89. 96.]
632     cord_individual_obj[indivial_i, :] = [ 10. 8. 46. 54.]
633     cord_individual_obj[indivial_i, :] = [ 11. 7. 112. 119.]
634     cord_individual_obj[indivial_i, :] = [ 12. 9. 105. 114.]
635     cord_individual_obj[indivial_i, :] = [ 13. 8. 97. 105.]
636     cord_individual_obj[indivial_i, :] = [ 14. 8. 102. 110.]
637     cord_individual_obj[indivial_i, :] = [ 15. 8. 102. 110.]
638     cord_individual_obj[indivial_i, :] = [ 16. 7. 77. 84.]
639     cord_individual_obj[indivial_i, :] = [ 17. 7. 142. 149.]
640     cord_individual_obj[indivial_i, :] = [ 18. 6. 100. 106.]
641     cord_individual_obj[indivial_i, :] = [ 19. 8. 93. 101.]
642     cord_individual_obj[indivial_i, :] = [ 20. 7. 134. 141.]
643     cord_individual_obj[indivial_i, :] = [ 21. 8. 73. 81.]
644     cord_individual_obj[indivial_i, :] = [ 22. 8. 60. 68.]
645     cord_individual_obj[indivial_i, :] = [ 23. 9. 95. 104.]
646     cord_individual_obj[indivial_i, :] = [ 24. 8. 136. 144.]
647
648     min(cord_individual_obj[:, 3]) = 54.0
649     historl_G_best_iter[iter, 3] = 54.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0. 8. 46. 54.]
654     cord_individual_obj[indivial_i, :] = [ 1. 9. 139. 148.]
655     cord_individual_obj[indivial_i, :] = [ 2. 9. 133. 142.]
656     cord_individual_obj[indivial_i, :] = [ 3. 9. 69. 78.]
657     cord_individual_obj[indivial_i, :] = [ 4. 8. 175. 183.]
658     cord_individual_obj[indivial_i, :] = [ 5. 9. 74. 83.]
659     cord_individual_obj[indivial_i, :] = [ 6. 10. 48. 58.]
660     cord_individual_obj[indivial_i, :] = [ 7. 8. 97. 105.]
661     cord_individual_obj[indivial_i, :] = [ 8. 7. 70. 77.]
662     cord_individual_obj[indivial_i, :] = [ 9. 6. 88. 94.]
663     cord_individual_obj[indivial_i, :] = [ 10. 9. 115. 124.]
664     cord_individual_obj[indivial_i, :] = [ 11. 9. 100. 109.]
665     cord_individual_obj[indivial_i, :] = [ 12. 7. 93. 100.]
666     cord_individual_obj[indivial_i, :] = [ 13. 8. 73. 81.]
667     cord_individual_obj[indivial_i, :] = [ 14. 9. 93. 102.]
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668 cord_individual_obj[indivial_i,:] = [ 15. 8. 106. 114.]
669 cord_individual_obj[indivial_i,:] = [ 16. 7. 126. 133.]
670 cord_individual_obj[indivial_i,:] = [ 17. 7. 103. 110.]
671 cord_individual_obj[indivial_i,:] = [ 18. 8. 174. 182.]
672 cord_individual_obj[indivial_i,:] = [ 19. 10. 107. 117.]
673 cord_individual_obj[indivial_i,:] = [20. 9. 61. 70.]
674 cord_individual_obj[indivial_i,:] = [21. 8. 74. 82.]
675 cord_individual_obj[indivial_i,:] = [22. 9. 109. 118.]
676 cord_individual_obj[indivial_i,:] = [23. 7. 156. 163.]
677 cord_individual_obj[indivial_i,:] = [24. 9. 67. 76.]
678
679 min(cord_individual_obj[:, 3]) = 54.0
680 historl_G_best_iter[iter, 3] = 54.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 215.0
689 Proportion_of_area = 0.19907407407407407
690 BEST_CHROM =
691 berth: [19.5 16.5 13.5 20.5 9.5 24.5 3.5 26. 19.5 2. 11.5 10. 5.5]
692 time: [3. 0. 1. 7. 1. 0. 4. 3. 5. 0. 5. 0. 0.]
693 num_QC: [4. 4. 2. 6. 5. 2. 2. 2. 4. 3. 4. 6. 2.]
694 Objective function values and some other indicators:
695 Obj0 = 8.00 Obj1 = 46.00 Obj0 + Obj1 = 54.00
696 Total movement of crane: 12.00
697 Total waiting time in berth position: 29.00
698 Total index of q during berthing: 908.00
699 Specific arrangement for each vessel:
700 V_id: 0 li: 9.0 xi: 19.5 bow of i: 15.0 tail of i: 24.0 gama_i0: 3.0 gama_i1: 4
701 .0 gama_i1 + 1: 5.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 140.0 work
702 load_i: 140.0 work load gap_i: 0
703 V_id: 1 li: 7.0 xi: 16.5 bow of i: 13.0 tail of i: 20.0 gama_i0: 0.0 gama_i1: 0
704 .0 gama_i1 + 1: 1.0 gama_i1 - gama_i0: 0.0 duration_time_i: 1.0 demand_i: 80.0 work
705 load_i: 80.0 work load gap_i: 0
706 V_id: 2 li: 3.0 xi: 13.5 bow of i: 12.0 tail of i: 15.0 gama_i0: 1.0 gama_i1: 3
707 .0 gama_i1 + 1: 4.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 100.0 work
708 load_i: 100.0 work load gap_i: 0
709 V_id: 3 li: 9.0 xi: 20.5 bow of i: 16.0 tail of i: 25.0 gama_i0: 7.0 gama_i1: 8
710 .0 gama_i1 + 1: 9.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 140.0 work
711 load_i: 140.0 work load gap_i: 0
712 V_id: 4 li: 5.0 xi: 9.5 bow of i: 7.0 tail of i: 12.0 gama_i0: 1.0 gama_i1: 2.0
713 .0 gama_i1 + 1: 3.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 120.0 work load_i:
714 load_i: 120.0 work load gap_i: 0
715 V_id: 5 li: 9.0 xi: 24.5 bow of i: 20.0 tail of i: 29.0 gama_i0: 0.0 gama_i1: 2
716 .0 gama_i1 + 1: 3.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 100.0 work
717 load_i: 100.0 work load gap_i: 0
718 V_id: 6 li: 7.0 xi: 3.5 bow of i: 0.0 tail of i: 7.0 gama_i0: 4.0 gama_i1: 6
719 .0 gama_i1 + 1: 7.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 100.0 work load_i:
720 load_i: 100.0 work load gap_i: 0
721 V_id: 7 li: 4.0 xi: 26.0 bow of i: 24.0 tail of i: 28.0 gama_i0: 3.0 gama_i1: 5
722 .0 gama_i1 + 1: 6.0 gama_i1 - gama_i0: 2.0 duration_time_i: 3.0 demand_i: 120.0 work
723 load_i: 120.0 work load gap_i: 0
724 V_id: 8 li: 7.0 xi: 19.5 bow of i: 16.0 tail of i: 23.0 gama_i0: 5.0 gama_i1: 6
725 .0 gama_i1 + 1: 7.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 120.0 work
726 load_i: 120.0 work load gap_i: 0
727 V_id: 9 li: 4.0 xi: 2.0 bow of i: 0.0 tail of i: 4.0 gama_i0: 0.0 gama_i1: 1.0
728 .0 gama_i1 + 1: 2.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 80.0 work load_i:
729 load_i: 80.0 work load gap_i: 0
730 V_id: 10 li: 9.0 xi: 11.5 bow of i: 7.0 tail of i: 16.0 gama_i0: 5.0 gama_i1: 1
731 .0 gama_i1 + 1: 7.0 gama_i1 - gama_i0: 1.0 duration_time_i: 2.0 demand_i: 160.0 work
732 load_i: 160.0 work load gap_i: 0
733 V_id: 11 li: 6.0 xi: 10.0 bow of i: 7.0 tail of i: 13.0 gama_i0: 0.0 gama_i1: 1
734 .0 gama_i1 + 1: 1.0 gama_i1 - gama_i0: 0.0 duration_time_i: 1.0 demand_i: 120.0 work
735 load_i: 120.0 work load gap_i: 0
736 V_id: 12 li: 3.0 xi: 5.5 bow of i: 4.0 tail of i: 7.0 gama_i0: 0.0 gama_i1: 3.0
737 .0 gama_i1 + 1: 4.0 gama_i1 - gama_i0: 3.0 duration_time_i: 4.0 demand_i: 140.0 work load_i:
738 load_i: 140.0 work load gap_i: 0
739
740 Algorithm finished and the total CPU time: 340 s
741 End
742
743

```