

unknown

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80 cord_individual_obj[indivial_i,:] = [ 16. 9. 180. 189.]
81 cord_individual_obj[indivial_i,:] = [ 17. 8. 92. 100.]
82 cord_individual_obj[indivial_i,:] = [ 18. 5. 176. 181.]
83 cord_individual_obj[indivial_i,:] = [ 19. 9. 170. 179.]
84 cord_individual_obj[indivial_i,:] = [ 20. 8. 164. 172.]
85 cord_individual_obj[indivial_i,:] = [ 21. 6. 175. 181.]
86 cord_individual_obj[indivial_i,:] = [ 22. 9. 144. 153.]
87 cord_individual_obj[indivial_i,:] = [ 23. 6. 161. 167.]
88 cord_individual_obj[indivial_i,:] = [ 24. 9. 136. 145.]
89
90 min(cord_individual_obj[:,3]) = 100.0
91 historl_G_best_iter[iter, 3] = 100.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 9. 115. 124.]
96 cord_individual_obj[indivial_i,:] = [ 1. 6. 124. 130.]
97 cord_individual_obj[indivial_i,:] = [ 2. 5. 143. 148.]
98 cord_individual_obj[indivial_i,:] = [ 3. 8. 147. 155.]
99 cord_individual_obj[indivial_i,:] = [ 4. 6. 202. 208.]
100 cord_individual_obj[indivial_i,:] = [ 5. 7. 178. 185.]
101 cord_individual_obj[indivial_i,:] = [ 6. 11. 186. 197.]
102 cord_individual_obj[indivial_i,:] = [ 7. 7. 120. 127.]
103 cord_individual_obj[indivial_i,:] = [ 8. 8. 125. 133.]
104 cord_individual_obj[indivial_i,:] = [ 9. 8. 92. 100.]
105 cord_individual_obj[indivial_i,:] = [10. 6. 74. 80.]
106 cord_individual_obj[indivial_i,:] = [11. 7. 80. 87.]
107 cord_individual_obj[indivial_i,:] = [12. 8. 104. 112.]
108 cord_individual_obj[indivial_i,:] = [13. 8. 159. 167.]
109 cord_individual_obj[indivial_i,:] = [14. 7. 152. 159.]
110 cord_individual_obj[indivial_i,:] = [15. 7. 137. 144.]
111 cord_individual_obj[indivial_i,:] = [16. 9. 140. 149.]
112 cord_individual_obj[indivial_i,:] = [17. 6. 94. 100.]
113 cord_individual_obj[indivial_i,:] = [18. 8. 134. 142.]
114 cord_individual_obj[indivial_i,:] = [19. 9. 174. 183.]
115 cord_individual_obj[indivial_i,:] = [20. 7. 163. 170.]
116 cord_individual_obj[indivial_i,:] = [21. 11. 134. 145.]
117 cord_individual_obj[indivial_i,:] = [22. 8. 182. 190.]
118 cord_individual_obj[indivial_i,:] = [23. 9. 123. 132.]
119 cord_individual_obj[indivial_i,:] = [24. 8. 108. 116.]
120
121 min(cord_individual_obj[:,3]) = 80.0
122 historl_G_best_iter[iter, 3] = 80.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 8. 190. 198.]
127 cord_individual_obj[indivial_i,:] = [ 1. 9. 170. 179.]
128 cord_individual_obj[indivial_i,:] = [ 2. 8. 141. 149.]
129 cord_individual_obj[indivial_i,:] = [ 3. 8. 238. 246.]
130 cord_individual_obj[indivial_i,:] = [ 4. 6. 74. 80.]
131 cord_individual_obj[indivial_i,:] = [ 5. 7. 160. 167.]
132 cord_individual_obj[indivial_i,:] = [ 6. 11. 190. 201.]
133 cord_individual_obj[indivial_i,:] = [ 7. 10. 163. 173.]
134 cord_individual_obj[indivial_i,:] = [ 8. 8. 122. 130.]
135 cord_individual_obj[indivial_i,:] = [ 9. 6. 207. 213.]
136 cord_individual_obj[indivial_i,:] = [10. 7. 183. 190.]
137 cord_individual_obj[indivial_i,:] = [11. 9. 176. 185.]
138 cord_individual_obj[indivial_i,:] = [12. 8. 122. 130.]
139 cord_individual_obj[indivial_i,:] = [13. 7. 198. 205.]
140 cord_individual_obj[indivial_i,:] = [14. 8. 174. 182.]
141 cord_individual_obj[indivial_i,:] = [15. 8. 189. 197.]
142 cord_individual_obj[indivial_i,:] = [16. 8. 157. 165.]
143 cord_individual_obj[indivial_i,:] = [17. 13. 180. 193.]
144 cord_individual_obj[indivial_i,:] = [18. 8. 135. 143.]
145 cord_individual_obj[indivial_i,:] = [19. 8. 167. 175.]
146 cord_individual_obj[indivial_i,:] = [20. 7. 145. 152.]
147 cord_individual_obj[indivial_i,:] = [21. 8. 93. 101.]
148 cord_individual_obj[indivial_i,:] = [22. 8. 172. 180.]
149 cord_individual_obj[indivial_i,:] = [23. 9. 132. 141.]
150 cord_individual_obj[indivial_i,:] = [24. 7. 130. 137.]
151
152 min(cord_individual_obj[:,3]) = 80.0
153 historl_G_best_iter[iter, 3] = 80.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 7. 157. 164.]
158 cord_individual_obj[indivial_i,:] = [ 1. 5. 101. 106.]
159 cord_individual_obj[indivial_i,:] = [ 2. 10. 165. 175.]
160 cord_individual_obj[indivial_i,:] = [ 3. 6. 74. 80.]
161 cord_individual_obj[indivial_i,:] = [ 4. 7. 95. 102.]
162 cord_individual_obj[indivial_i,:] = [ 5. 7. 100. 107.]
163 cord_individual_obj[indivial_i,:] = [ 6. 7. 130. 137.]

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164 cord_individual_obj[indivial_i,:] = [ 7. 8. 171. 179.]
165 cord_individual_obj[indivial_i,:] = [ 8. 7. 235. 242.]
166 cord_individual_obj[indivial_i,:] = [ 9. 6. 173. 179.]
167 cord_individual_obj[indivial_i,:] = [ 10. 7. 126. 133.]
168 cord_individual_obj[indivial_i,:] = [ 11. 7. 109. 116.]
169 cord_individual_obj[indivial_i,:] = [ 12. 7. 102. 109.]
170 cord_individual_obj[indivial_i,:] = [ 13. 7. 192. 199.]
171 cord_individual_obj[indivial_i,:] = [ 14. 8. 110. 118.]
172 cord_individual_obj[indivial_i,:] = [ 15. 8. 165. 173.]
173 cord_individual_obj[indivial_i,:] = [ 16. 7. 196. 203.]
174 cord_individual_obj[indivial_i,:] = [ 17. 9. 146. 155.]
175 cord_individual_obj[indivial_i,:] = [ 18. 6. 210. 216.]
176 cord_individual_obj[indivial_i,:] = [ 19. 6. 208. 214.]
177 cord_individual_obj[indivial_i,:] = [ 20. 10. 182. 192.]
178 cord_individual_obj[indivial_i,:] = [ 21. 7. 134. 141.]
179 cord_individual_obj[indivial_i,:] = [ 22. 12. 175. 187.]
180 cord_individual_obj[indivial_i,:] = [ 23. 8. 212. 220.]
181 cord_individual_obj[indivial_i,:] = [ 24. 6. 112. 118.]
182
183 min(cord_individual_obj[:,3]) = 80.0
184 historl_G_best_iter[iter,3] = 80.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [ 0. 9. 145. 154.]
189 cord_individual_obj[indivial_i,:] = [ 1. 7. 123. 130.]
190 cord_individual_obj[indivial_i,:] = [ 2. 6. 156. 162.]
191 cord_individual_obj[indivial_i,:] = [ 3. 7. 190. 197.]
192 cord_individual_obj[indivial_i,:] = [ 4. 8. 149. 157.]
193 cord_individual_obj[indivial_i,:] = [ 5. 7. 148. 155.]
194 cord_individual_obj[indivial_i,:] = [ 6. 8. 109. 117.]
195 cord_individual_obj[indivial_i,:] = [ 7. 7. 132. 139.]
196 cord_individual_obj[indivial_i,:] = [ 8. 6. 74. 80.]
197 cord_individual_obj[indivial_i,:] = [ 9. 8. 138. 146.]
198 cord_individual_obj[indivial_i,:] = [ 10. 8. 103. 111.]
199 cord_individual_obj[indivial_i,:] = [ 11. 10. 155. 165.]
200 cord_individual_obj[indivial_i,:] = [ 12. 8. 169. 177.]
201 cord_individual_obj[indivial_i,:] = [ 13. 6. 76. 82.]
202 cord_individual_obj[indivial_i,:] = [ 14. 10. 121. 131.]
203 cord_individual_obj[indivial_i,:] = [ 15. 6. 111. 117.]
204 cord_individual_obj[indivial_i,:] = [ 16. 6. 169. 175.]
205 cord_individual_obj[indivial_i,:] = [ 17. 8. 147. 155.]
206 cord_individual_obj[indivial_i,:] = [ 18. 7. 132. 139.]
207 cord_individual_obj[indivial_i,:] = [ 19. 6. 95. 101.]
208 cord_individual_obj[indivial_i,:] = [ 20. 9. 133. 142.]
209 cord_individual_obj[indivial_i,:] = [ 21. 8. 143. 151.]
210 cord_individual_obj[indivial_i,:] = [ 22. 7. 148. 155.]
211 cord_individual_obj[indivial_i,:] = [ 23. 6. 130. 136.]
212 cord_individual_obj[indivial_i,:] = [ 24. 10. 175. 185.]
213
214 min(cord_individual_obj[:,3]) = 80.0
215 historl_G_best_iter[iter,3] = 80.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i,:] = [ 0. 7. 155. 162.]
220 cord_individual_obj[indivial_i,:] = [ 1. 7. 205. 212.]
221 cord_individual_obj[indivial_i,:] = [ 2. 5. 121. 126.]
222 cord_individual_obj[indivial_i,:] = [ 3. 6. 74. 80.]
223 cord_individual_obj[indivial_i,:] = [ 4. 8. 115. 123.]
224 cord_individual_obj[indivial_i,:] = [ 5. 7. 162. 169.]
225 cord_individual_obj[indivial_i,:] = [ 6. 9. 126. 135.]
226 cord_individual_obj[indivial_i,:] = [ 7. 8. 166. 174.]
227 cord_individual_obj[indivial_i,:] = [ 8. 8. 144. 152.]
228 cord_individual_obj[indivial_i,:] = [ 9. 9. 107. 116.]
229 cord_individual_obj[indivial_i,:] = [ 10. 7. 118. 125.]
230 cord_individual_obj[indivial_i,:] = [ 11. 7. 191. 198.]
231 cord_individual_obj[indivial_i,:] = [ 12. 9. 129. 138.]
232 cord_individual_obj[indivial_i,:] = [ 13. 8. 157. 165.]
233 cord_individual_obj[indivial_i,:] = [ 14. 8. 150. 158.]
234 cord_individual_obj[indivial_i,:] = [ 15. 5. 154. 159.]
235 cord_individual_obj[indivial_i,:] = [ 16. 7. 138. 145.]
236 cord_individual_obj[indivial_i,:] = [ 17. 9. 107. 116.]
237 cord_individual_obj[indivial_i,:] = [ 18. 9. 123. 132.]
238 cord_individual_obj[indivial_i,:] = [ 19. 6. 150. 156.]
239 cord_individual_obj[indivial_i,:] = [ 20. 6. 128. 134.]
240 cord_individual_obj[indivial_i,:] = [ 21. 7. 181. 188.]
241 cord_individual_obj[indivial_i,:] = [ 22. 8. 162. 170.]
242 cord_individual_obj[indivial_i,:] = [ 23. 10. 226. 236.]
243 cord_individual_obj[indivial_i,:] = [ 24. 9. 157. 166.]
244
245 min(cord_individual_obj[:,3]) = 80.0
246 historl_G_best_iter[iter,3] = 80.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0. 9. 207. 216.]
251 cord_individual_obj[indivial_i, :] = [ 1. 9. 161. 170.]
252 cord_individual_obj[indivial_i, :] = [ 2. 9. 150. 159.]
253 cord_individual_obj[indivial_i, :] = [ 3. 6. 107. 113.]
254 cord_individual_obj[indivial_i, :] = [ 4. 10. 118. 128.]
255 cord_individual_obj[indivial_i, :] = [ 5. 6. 135. 141.]
256 cord_individual_obj[indivial_i, :] = [ 6. 7. 100. 107.]
257 cord_individual_obj[indivial_i, :] = [ 7. 8. 117. 125.]
258 cord_individual_obj[indivial_i, :] = [ 8. 6. 186. 192.]
259 cord_individual_obj[indivial_i, :] = [ 9. 8. 183. 191.]
260 cord_individual_obj[indivial_i, :] = [ 10. 8. 153. 161.]
261 cord_individual_obj[indivial_i, :] = [ 11. 9. 166. 175.]
262 cord_individual_obj[indivial_i, :] = [ 12. 7. 90. 97.]
263 cord_individual_obj[indivial_i, :] = [ 13. 7. 109. 116.]
264 cord_individual_obj[indivial_i, :] = [ 14. 7. 107. 114.]
265 cord_individual_obj[indivial_i, :] = [ 15. 7. 109. 116.]
266 cord_individual_obj[indivial_i, :] = [ 16. 8. 150. 158.]
267 cord_individual_obj[indivial_i, :] = [ 17. 10. 131. 141.]
268 cord_individual_obj[indivial_i, :] = [ 18. 8. 147. 155.]
269 cord_individual_obj[indivial_i, :] = [ 19. 7. 88. 95.]
270 cord_individual_obj[indivial_i, :] = [ 20. 6. 144. 150.]
271 cord_individual_obj[indivial_i, :] = [ 21. 10. 188. 198.]
272 cord_individual_obj[indivial_i, :] = [ 22. 6. 188. 194.]
273 cord_individual_obj[indivial_i, :] = [ 23. 6. 74. 80.]
274 cord_individual_obj[indivial_i, :] = [ 24. 10. 118. 128.]
275

276 min(cord_individual_obj[:, 3]) = 80.0
277 historl_G_best_iter[iter, 3] = 80.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0. 6. 74. 80.]
282 cord_individual_obj[indivial_i, :] = [ 1. 6. 147. 153.]
283 cord_individual_obj[indivial_i, :] = [ 2. 9. 178. 187.]
284 cord_individual_obj[indivial_i, :] = [ 3. 8. 151. 159.]
285 cord_individual_obj[indivial_i, :] = [ 4. 7. 141. 148.]
286 cord_individual_obj[indivial_i, :] = [ 5. 7. 132. 139.]
287 cord_individual_obj[indivial_i, :] = [ 6. 7. 94. 101.]
288 cord_individual_obj[indivial_i, :] = [ 7. 8. 185. 193.]
289 cord_individual_obj[indivial_i, :] = [ 8. 7. 117. 124.]
290 cord_individual_obj[indivial_i, :] = [ 9. 8. 147. 155.]
291 cord_individual_obj[indivial_i, :] = [ 10. 7. 191. 198.]
292 cord_individual_obj[indivial_i, :] = [ 11. 5. 125. 130.]
293 cord_individual_obj[indivial_i, :] = [ 12. 8. 175. 183.]
294 cord_individual_obj[indivial_i, :] = [ 13. 7. 82. 89.]
295 cord_individual_obj[indivial_i, :] = [ 14. 8. 170. 178.]
296 cord_individual_obj[indivial_i, :] = [ 15. 8. 133. 141.]
297 cord_individual_obj[indivial_i, :] = [ 16. 6. 167. 173.]
298 cord_individual_obj[indivial_i, :] = [ 17. 9. 170. 179.]
299 cord_individual_obj[indivial_i, :] = [ 18. 5. 132. 137.]
300 cord_individual_obj[indivial_i, :] = [ 19. 7. 133. 140.]
301 cord_individual_obj[indivial_i, :] = [ 20. 7. 81. 88.]
302 cord_individual_obj[indivial_i, :] = [ 21. 6. 157. 163.]
303 cord_individual_obj[indivial_i, :] = [ 22. 9. 150. 159.]
304 cord_individual_obj[indivial_i, :] = [ 23. 7. 154. 161.]
305 cord_individual_obj[indivial_i, :] = [ 24. 8. 119. 127.]
306

307 min(cord_individual_obj[:, 3]) = 80.0
308 historl_G_best_iter[iter, 3] = 80.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0. 7. 139. 146.]
313 cord_individual_obj[indivial_i, :] = [ 1. 6. 186. 192.]
314 cord_individual_obj[indivial_i, :] = [ 2. 8. 237. 245.]
315 cord_individual_obj[indivial_i, :] = [ 3. 6. 161. 167.]
316 cord_individual_obj[indivial_i, :] = [ 4. 7. 156. 163.]
317 cord_individual_obj[indivial_i, :] = [ 5. 6. 103. 109.]
318 cord_individual_obj[indivial_i, :] = [ 6. 7. 112. 119.]
319 cord_individual_obj[indivial_i, :] = [ 7. 7. 161. 168.]
320 cord_individual_obj[indivial_i, :] = [ 8. 7. 115. 122.]
321 cord_individual_obj[indivial_i, :] = [ 9. 7. 98. 105.]
322 cord_individual_obj[indivial_i, :] = [ 10. 6. 74. 80.]
323 cord_individual_obj[indivial_i, :] = [ 11. 8. 132. 140.]
324 cord_individual_obj[indivial_i, :] = [ 12. 9. 144. 153.]
325 cord_individual_obj[indivial_i, :] = [ 13. 8. 105. 113.]
326 cord_individual_obj[indivial_i, :] = [ 14. 6. 115. 121.]
327 cord_individual_obj[indivial_i, :] = [ 15. 7. 100. 107.]
328 cord_individual_obj[indivial_i, :] = [ 16. 7. 120. 127.]
329 cord_individual_obj[indivial_i, :] = [ 17. 8. 79. 87.]
330 cord_individual_obj[indivial_i, :] = [ 18. 9. 179. 188.]
331 cord_individual_obj[indivial_i, :] = [ 19. 6. 118. 124.]

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332 cord_individual_obj[indivial_i, :] = [ 20.  8. 130. 138.]
333 cord_individual_obj[indivial_i, :] = [ 21. 12. 199. 211.]
334 cord_individual_obj[indivial_i, :] = [ 22.  8. 137. 145.]
335 cord_individual_obj[indivial_i, :] = [ 23.  9. 147. 156.]
336 cord_individual_obj[indivial_i, :] = [ 24.  6. 102. 108.]
337
338 min(cord_individual_obj[:, 3]) = 80.0
339 histol_G_best_iter[iter, 3] = 80.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i, :] = [ 0.  8. 218. 226.]
344 cord_individual_obj[indivial_i, :] = [ 1.  6. 137. 143.]
345 cord_individual_obj[indivial_i, :] = [ 2.  6. 74. 80.]
346 cord_individual_obj[indivial_i, :] = [ 3.  9. 186. 195.]
347 cord_individual_obj[indivial_i, :] = [ 4.  8. 118. 126.]
348 cord_individual_obj[indivial_i, :] = [ 5.  8. 175. 183.]
349 cord_individual_obj[indivial_i, :] = [ 6.  9. 104. 113.]
350 cord_individual_obj[indivial_i, :] = [ 7.  9. 146. 155.]
351 cord_individual_obj[indivial_i, :] = [ 8.  12. 211. 223.]
352 cord_individual_obj[indivial_i, :] = [ 9.  7. 172. 179.]
353 cord_individual_obj[indivial_i, :] = [ 10. 7. 211. 218.]
354 cord_individual_obj[indivial_i, :] = [ 11. 7. 196. 203.]
355 cord_individual_obj[indivial_i, :] = [ 12. 9. 136. 145.]
356 cord_individual_obj[indivial_i, :] = [ 13. 7. 139. 146.]
357 cord_individual_obj[indivial_i, :] = [ 14. 6. 118. 124.]
358 cord_individual_obj[indivial_i, :] = [ 15. 10. 202. 212.]
359 cord_individual_obj[indivial_i, :] = [ 16. 7. 218. 225.]
360 cord_individual_obj[indivial_i, :] = [ 17. 9. 124. 133.]
361 cord_individual_obj[indivial_i, :] = [ 18. 7. 146. 153.]
362 cord_individual_obj[indivial_i, :] = [ 19. 7. 162. 169.]
363 cord_individual_obj[indivial_i, :] = [ 20. 8. 224. 232.]
364 cord_individual_obj[indivial_i, :] = [ 21. 7. 114. 121.]
365 cord_individual_obj[indivial_i, :] = [ 22. 8. 128. 136.]
366 cord_individual_obj[indivial_i, :] = [ 23. 8. 162. 170.]
367 cord_individual_obj[indivial_i, :] = [ 24. 9. 121. 130.]
368
369 min(cord_individual_obj[:, 3]) = 80.0
370 histol_G_best_iter[iter, 3] = 80.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i, :] = [ 0.  6. 142. 148.]
375 cord_individual_obj[indivial_i, :] = [ 1.  6. 117. 123.]
376 cord_individual_obj[indivial_i, :] = [ 2.  7. 174. 181.]
377 cord_individual_obj[indivial_i, :] = [ 3.  8. 178. 186.]
378 cord_individual_obj[indivial_i, :] = [ 4.  9. 113. 122.]
379 cord_individual_obj[indivial_i, :] = [ 5.  7. 106. 113.]
380 cord_individual_obj[indivial_i, :] = [ 6.  8. 148. 156.]
381 cord_individual_obj[indivial_i, :] = [ 7.  8. 157. 165.]
382 cord_individual_obj[indivial_i, :] = [ 8.  7. 163. 170.]
383 cord_individual_obj[indivial_i, :] = [ 9.  7. 157. 164.]
384 cord_individual_obj[indivial_i, :] = [ 10. 5. 145. 150.]
385 cord_individual_obj[indivial_i, :] = [ 11. 8. 136. 144.]
386 cord_individual_obj[indivial_i, :] = [ 12. 6. 139. 145.]
387 cord_individual_obj[indivial_i, :] = [ 13. 6. 131. 137.]
388 cord_individual_obj[indivial_i, :] = [ 14. 7. 119. 126.]
389 cord_individual_obj[indivial_i, :] = [ 15. 6. 100. 106.]
390 cord_individual_obj[indivial_i, :] = [ 16. 7. 138. 145.]
391 cord_individual_obj[indivial_i, :] = [ 17. 10. 99. 109.]
392 cord_individual_obj[indivial_i, :] = [ 18. 8. 118. 126.]
393 cord_individual_obj[indivial_i, :] = [ 19. 8. 83. 91.]
394 cord_individual_obj[indivial_i, :] = [ 20. 6. 74. 80.]
395 cord_individual_obj[indivial_i, :] = [ 21. 8. 94. 102.]
396 cord_individual_obj[indivial_i, :] = [ 22. 7. 163. 170.]
397 cord_individual_obj[indivial_i, :] = [ 23. 7. 83. 90.]
398 cord_individual_obj[indivial_i, :] = [ 24. 6. 120. 126.]
399
400 min(cord_individual_obj[:, 3]) = 80.0
401 histol_G_best_iter[iter, 3] = 80.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i, :] = [ 0.  6. 183. 189.]
406 cord_individual_obj[indivial_i, :] = [ 1.  8. 196. 204.]
407 cord_individual_obj[indivial_i, :] = [ 2.  8. 124. 132.]
408 cord_individual_obj[indivial_i, :] = [ 3.  6. 74. 80.]
409 cord_individual_obj[indivial_i, :] = [ 4.  7. 165. 172.]
410 cord_individual_obj[indivial_i, :] = [ 5.  8. 130. 138.]
411 cord_individual_obj[indivial_i, :] = [ 6.  7. 159. 166.]
412 cord_individual_obj[indivial_i, :] = [ 7.  7. 121. 128.]
413 cord_individual_obj[indivial_i, :] = [ 8.  9. 151. 160.]
414 cord_individual_obj[indivial_i, :] = [ 9.  6. 218. 224.]
415 cord_individual_obj[indivial_i, :] = [10. 7. 89. 96.]

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416 cord_individual_obj[indivial_i,:] = [ 11. 7. 93. 100.]
417 cord_individual_obj[indivial_i,:] = [ 12. 7. 148. 155.]
418 cord_individual_obj[indivial_i,:] = [ 13. 8. 171. 179.]
419 cord_individual_obj[indivial_i,:] = [ 14. 7. 168. 175.]
420 cord_individual_obj[indivial_i,:] = [ 15. 8. 164. 172.]
421 cord_individual_obj[indivial_i,:] = [ 16. 7. 208. 215.]
422 cord_individual_obj[indivial_i,:] = [ 17. 6. 167. 173.]
423 cord_individual_obj[indivial_i,:] = [ 18. 6. 114. 120.]
424 cord_individual_obj[indivial_i,:] = [ 19. 8. 198. 206.]
425 cord_individual_obj[indivial_i,:] = [ 20. 6. 150. 156.]
426 cord_individual_obj[indivial_i,:] = [ 21. 7. 108. 115.]
427 cord_individual_obj[indivial_i,:] = [ 22. 7. 127. 134.]
428 cord_individual_obj[indivial_i,:] = [ 23. 6. 125. 131.]
429 cord_individual_obj[indivial_i,:] = [ 24. 10. 173. 183.]
430
431 min(cord_individual_obj[:,3]) = 80.0
432 histol_G_best_iter[iter,3] = 80.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 7. 102. 109.]
437 cord_individual_obj[indivial_i,:] = [ 1. 6. 201. 207.]
438 cord_individual_obj[indivial_i,:] = [ 2. 6. 204. 210.]
439 cord_individual_obj[indivial_i,:] = [ 3. 7. 178. 185.]
440 cord_individual_obj[indivial_i,:] = [ 4. 7. 164. 171.]
441 cord_individual_obj[indivial_i,:] = [ 5. 8. 181. 189.]
442 cord_individual_obj[indivial_i,:] = [ 6. 9. 124. 133.]
443 cord_individual_obj[indivial_i,:] = [ 7. 7. 149. 156.]
444 cord_individual_obj[indivial_i,:] = [ 8. 8. 97. 105.]
445 cord_individual_obj[indivial_i,:] = [ 9. 6. 74. 80.]
446 cord_individual_obj[indivial_i,:] = [ 10. 7. 152. 159.]
447 cord_individual_obj[indivial_i,:] = [ 11. 7. 203. 210.]
448 cord_individual_obj[indivial_i,:] = [ 12. 8. 146. 154.]
449 cord_individual_obj[indivial_i,:] = [ 13. 6. 163. 169.]
450 cord_individual_obj[indivial_i,:] = [ 14. 7. 178. 185.]
451 cord_individual_obj[indivial_i,:] = [ 15. 9. 143. 152.]
452 cord_individual_obj[indivial_i,:] = [ 16. 8. 135. 143.]
453 cord_individual_obj[indivial_i,:] = [ 17. 10. 126. 136.]
454 cord_individual_obj[indivial_i,:] = [ 18. 8. 153. 161.]
455 cord_individual_obj[indivial_i,:] = [ 19. 6. 110. 116.]
456 cord_individual_obj[indivial_i,:] = [ 20. 7. 142. 149.]
457 cord_individual_obj[indivial_i,:] = [ 21. 8. 136. 144.]
458 cord_individual_obj[indivial_i,:] = [ 22. 7. 227. 234.]
459 cord_individual_obj[indivial_i,:] = [ 23. 7. 146. 153.]
460 cord_individual_obj[indivial_i,:] = [ 24. 7. 125. 132.]
461
462 min(cord_individual_obj[:,3]) = 80.0
463 histol_G_best_iter[iter,3] = 80.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 6. 147. 153.]
468 cord_individual_obj[indivial_i,:] = [ 1. 8. 99. 107.]
469 cord_individual_obj[indivial_i,:] = [ 2. 7. 198. 205.]
470 cord_individual_obj[indivial_i,:] = [ 3. 8. 155. 163.]
471 cord_individual_obj[indivial_i,:] = [ 4. 7. 134. 141.]
472 cord_individual_obj[indivial_i,:] = [ 5. 8. 145. 153.]
473 cord_individual_obj[indivial_i,:] = [ 6. 8. 128. 136.]
474 cord_individual_obj[indivial_i,:] = [ 7. 6. 114. 120.]
475 cord_individual_obj[indivial_i,:] = [ 8. 8. 161. 169.]
476 cord_individual_obj[indivial_i,:] = [ 9. 7. 156. 163.]
477 cord_individual_obj[indivial_i,:] = [ 10. 7. 172. 179.]
478 cord_individual_obj[indivial_i,:] = [ 11. 8. 122. 130.]
479 cord_individual_obj[indivial_i,:] = [ 12. 9. 181. 190.]
480 cord_individual_obj[indivial_i,:] = [ 13. 7. 94. 101.]
481 cord_individual_obj[indivial_i,:] = [ 14. 7. 160. 167.]
482 cord_individual_obj[indivial_i,:] = [ 15. 8. 145. 153.]
483 cord_individual_obj[indivial_i,:] = [ 16. 7. 136. 143.]
484 cord_individual_obj[indivial_i,:] = [ 17. 7. 153. 160.]
485 cord_individual_obj[indivial_i,:] = [ 18. 8. 148. 156.]
486 cord_individual_obj[indivial_i,:] = [ 19. 7. 172. 179.]
487 cord_individual_obj[indivial_i,:] = [ 20. 8. 146. 154.]
488 cord_individual_obj[indivial_i,:] = [ 21. 8. 126. 134.]
489 cord_individual_obj[indivial_i,:] = [ 22. 6. 74. 80.]
490 cord_individual_obj[indivial_i,:] = [ 23. 6. 104. 110.]
491 cord_individual_obj[indivial_i,:] = [ 24. 7. 150. 157.]
492
493 min(cord_individual_obj[:,3]) = 80.0
494 histol_G_best_iter[iter,3] = 80.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 9. 125. 134.]
499 cord_individual_obj[indivial_i,:] = [ 1. 8. 227. 235.]

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500 cord_individual_obj[indivial_i,:] = [ 2. 6. 74. 80.]
501 cord_individual_obj[indivial_i,:] = [ 3. 8. 179. 187.]
502 cord_individual_obj[indivial_i,:] = [ 4. 7. 108. 115.]
503 cord_individual_obj[indivial_i,:] = [ 5. 9. 190. 199.]
504 cord_individual_obj[indivial_i,:] = [ 6. 8. 126. 134.]
505 cord_individual_obj[indivial_i,:] = [ 7. 10. 134. 144.]
506 cord_individual_obj[indivial_i,:] = [ 8. 8. 137. 145.]
507 cord_individual_obj[indivial_i,:] = [ 9. 8. 109. 117.]
508 cord_individual_obj[indivial_i,:] = [ 10. 8. 176. 184.]
509 cord_individual_obj[indivial_i,:] = [ 11. 7. 90. 97.]
510 cord_individual_obj[indivial_i,:] = [ 12. 9. 144. 153.]
511 cord_individual_obj[indivial_i,:] = [ 13. 8. 176. 184.]
512 cord_individual_obj[indivial_i,:] = [ 14. 8. 179. 187.]
513 cord_individual_obj[indivial_i,:] = [ 15. 8. 144. 152.]
514 cord_individual_obj[indivial_i,:] = [ 16. 9. 170. 179.]
515 cord_individual_obj[indivial_i,:] = [ 17. 10. 171. 181.]
516 cord_individual_obj[indivial_i,:] = [ 18. 7. 129. 136.]
517 cord_individual_obj[indivial_i,:] = [ 19. 7. 210. 217.]
518 cord_individual_obj[indivial_i,:] = [ 20. 7. 151. 158.]
519 cord_individual_obj[indivial_i,:] = [ 21. 8. 156. 164.]
520 cord_individual_obj[indivial_i,:] = [ 22. 6. 163. 169.]
521 cord_individual_obj[indivial_i,:] = [ 23. 7. 134. 141.]
522 cord_individual_obj[indivial_i,:] = [ 24. 7. 112. 119.]
523
524 min(cord_individual_obj[:, 3]) = 80.0
525 histol_G_best_iter[iter, 3] = 80.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i,:] = [ 0. 5. 141. 146.]
530 cord_individual_obj[indivial_i,:] = [ 1. 6. 74. 80.]
531 cord_individual_obj[indivial_i,:] = [ 2. 8. 168. 176.]
532 cord_individual_obj[indivial_i,:] = [ 3. 10. 143. 153.]
533 cord_individual_obj[indivial_i,:] = [ 4. 6. 130. 136.]
534 cord_individual_obj[indivial_i,:] = [ 5. 6. 101. 107.]
535 cord_individual_obj[indivial_i,:] = [ 6. 7. 161. 168.]
536 cord_individual_obj[indivial_i,:] = [ 7. 7. 131. 138.]
537 cord_individual_obj[indivial_i,:] = [ 8. 7. 149. 156.]
538 cord_individual_obj[indivial_i,:] = [ 9. 6. 185. 191.]
539 cord_individual_obj[indivial_i,:] = [ 10. 6. 116. 122.]
540 cord_individual_obj[indivial_i,:] = [ 11. 8. 151. 159.]
541 cord_individual_obj[indivial_i,:] = [ 12. 8. 97. 105.]
542 cord_individual_obj[indivial_i,:] = [ 13. 8. 186. 194.]
543 cord_individual_obj[indivial_i,:] = [ 14. 8. 121. 129.]
544 cord_individual_obj[indivial_i,:] = [ 15. 8. 130. 138.]
545 cord_individual_obj[indivial_i,:] = [ 16. 5. 119. 124.]
546 cord_individual_obj[indivial_i,:] = [ 17. 10. 128. 138.]
547 cord_individual_obj[indivial_i,:] = [ 18. 8. 127. 135.]
548 cord_individual_obj[indivial_i,:] = [ 19. 5. 178. 183.]
549 cord_individual_obj[indivial_i,:] = [ 20. 7. 68. 75.]
550 cord_individual_obj[indivial_i,:] = [ 21. 8. 151. 159.]
551 cord_individual_obj[indivial_i,:] = [ 22. 8. 206. 214.]
552 cord_individual_obj[indivial_i,:] = [ 23. 6. 142. 148.]
553 cord_individual_obj[indivial_i,:] = [ 24. 7. 93. 100.]
554
555 min(cord_individual_obj[:, 3]) = 75.0
556 histol_G_best_iter[iter, 3] = 75.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i,:] = [ 0. 8. 191. 199.]
561 cord_individual_obj[indivial_i,:] = [ 1. 8. 165. 173.]
562 cord_individual_obj[indivial_i,:] = [ 2. 8. 118. 126.]
563 cord_individual_obj[indivial_i,:] = [ 3. 7. 195. 202.]
564 cord_individual_obj[indivial_i,:] = [ 4. 7. 145. 152.]
565 cord_individual_obj[indivial_i,:] = [ 5. 8. 134. 142.]
566 cord_individual_obj[indivial_i,:] = [ 6. 6. 116. 122.]
567 cord_individual_obj[indivial_i,:] = [ 7. 7. 127. 134.]
568 cord_individual_obj[indivial_i,:] = [ 8. 9. 213. 222.]
569 cord_individual_obj[indivial_i,:] = [ 9. 8. 210. 218.]
570 cord_individual_obj[indivial_i,:] = [ 10. 6. 75. 81.]
571 cord_individual_obj[indivial_i,:] = [ 11. 6. 234. 240.]
572 cord_individual_obj[indivial_i,:] = [ 12. 8. 108. 116.]
573 cord_individual_obj[indivial_i,:] = [ 13. 7. 201. 208.]
574 cord_individual_obj[indivial_i,:] = [ 14. 8. 189. 197.]
575 cord_individual_obj[indivial_i,:] = [ 15. 10. 195. 205.]
576 cord_individual_obj[indivial_i,:] = [ 16. 9. 139. 148.]
577 cord_individual_obj[indivial_i,:] = [ 17. 9. 126. 135.]
578 cord_individual_obj[indivial_i,:] = [ 18. 7. 125. 132.]
579 cord_individual_obj[indivial_i,:] = [ 19. 11. 126. 137.]
580 cord_individual_obj[indivial_i,:] = [ 20. 7. 174. 181.]
581 cord_individual_obj[indivial_i,:] = [ 21. 9. 194. 203.]
582 cord_individual_obj[indivial_i,:] = [ 22. 7. 68. 75.]
583 cord_individual_obj[indivial_i,:] = [ 23. 8. 96. 104.]

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unknown

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584     cord_individual_obj[indivial_i, :] = [ 24.  7. 166. 173.]
585
586     min(cord_individual_obj[:, 3]) = 75.0
587     historl_G_best_iter[iter, 3] = 75.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [ 0.  7. 121. 128.]
592     cord_individual_obj[indivial_i, :] = [ 1.  6. 151. 157.]
593     cord_individual_obj[indivial_i, :] = [ 2.  9. 170. 179.]
594     cord_individual_obj[indivial_i, :] = [ 3.  6. 160. 166.]
595     cord_individual_obj[indivial_i, :] = [ 4.  8. 232. 240.]
596     cord_individual_obj[indivial_i, :] = [ 5.  8. 118. 126.]
597     cord_individual_obj[indivial_i, :] = [ 6.  6. 156. 162.]
598     cord_individual_obj[indivial_i, :] = [ 7.  6. 92. 98.]
599     cord_individual_obj[indivial_i, :] = [ 8.  8. 133. 141.]
600     cord_individual_obj[indivial_i, :] = [ 9.  8. 127. 135.]
601     cord_individual_obj[indivial_i, :] = [ 10. 7. 186. 193.]
602     cord_individual_obj[indivial_i, :] = [ 11. 7. 68. 75.]
603     cord_individual_obj[indivial_i, :] = [ 12. 7. 110. 117.]
604     cord_individual_obj[indivial_i, :] = [ 13. 6. 113. 119.]
605     cord_individual_obj[indivial_i, :] = [ 14. 8. 115. 123.]
606     cord_individual_obj[indivial_i, :] = [ 15. 8. 111. 119.]
607     cord_individual_obj[indivial_i, :] = [ 16. 8. 160. 168.]
608     cord_individual_obj[indivial_i, :] = [ 17. 6. 130. 136.]
609     cord_individual_obj[indivial_i, :] = [ 18. 8. 87. 95.]
610     cord_individual_obj[indivial_i, :] = [ 19. 9. 126. 135.]
611     cord_individual_obj[indivial_i, :] = [ 20. 5. 184. 189.]
612     cord_individual_obj[indivial_i, :] = [ 21. 9. 178. 187.]
613     cord_individual_obj[indivial_i, :] = [ 22. 8. 156. 164.]
614     cord_individual_obj[indivial_i, :] = [ 23. 8. 127. 135.]
615     cord_individual_obj[indivial_i, :] = [ 24. 7. 203. 210.]
616
617     min(cord_individual_obj[:, 3]) = 75.0
618     historl_G_best_iter[iter, 3] = 75.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0.  6. 104. 110.]
623     cord_individual_obj[indivial_i, :] = [ 1.  7. 167. 174.]
624     cord_individual_obj[indivial_i, :] = [ 2.  9. 259. 268.]
625     cord_individual_obj[indivial_i, :] = [ 3.  7. 184. 191.]
626     cord_individual_obj[indivial_i, :] = [ 4.  7. 68. 75.]
627     cord_individual_obj[indivial_i, :] = [ 5.  7. 107. 114.]
628     cord_individual_obj[indivial_i, :] = [ 6.  8. 157. 165.]
629     cord_individual_obj[indivial_i, :] = [ 7.  8. 108. 116.]
630     cord_individual_obj[indivial_i, :] = [ 8.  9. 156. 165.]
631     cord_individual_obj[indivial_i, :] = [ 9.  6. 128. 134.]
632     cord_individual_obj[indivial_i, :] = [ 10. 8. 197. 205.]
633     cord_individual_obj[indivial_i, :] = [ 11. 7. 122. 129.]
634     cord_individual_obj[indivial_i, :] = [ 12. 10. 125. 135.]
635     cord_individual_obj[indivial_i, :] = [ 13. 8. 163. 171.]
636     cord_individual_obj[indivial_i, :] = [ 14. 7. 169. 176.]
637     cord_individual_obj[indivial_i, :] = [ 15. 8. 149. 157.]
638     cord_individual_obj[indivial_i, :] = [ 16. 9. 133. 142.]
639     cord_individual_obj[indivial_i, :] = [ 17. 5. 158. 163.]
640     cord_individual_obj[indivial_i, :] = [ 18. 8. 122. 130.]
641     cord_individual_obj[indivial_i, :] = [ 19. 9. 153. 162.]
642     cord_individual_obj[indivial_i, :] = [ 20. 7. 166. 173.]
643     cord_individual_obj[indivial_i, :] = [ 21. 9. 159. 168.]
644     cord_individual_obj[indivial_i, :] = [ 22. 8. 136. 144.]
645     cord_individual_obj[indivial_i, :] = [ 23. 7. 170. 177.]
646     cord_individual_obj[indivial_i, :] = [ 24. 11. 145. 156.]
647
648     min(cord_individual_obj[:, 3]) = 75.0
649     historl_G_best_iter[iter, 3] = 75.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0.  9. 181. 190.]
654     cord_individual_obj[indivial_i, :] = [ 1.  8. 229. 237.]
655     cord_individual_obj[indivial_i, :] = [ 2.  7. 68. 75.]
656     cord_individual_obj[indivial_i, :] = [ 3.  7. 197. 204.]
657     cord_individual_obj[indivial_i, :] = [ 4.  6. 133. 139.]
658     cord_individual_obj[indivial_i, :] = [ 5.  7. 109. 116.]
659     cord_individual_obj[indivial_i, :] = [ 6.  7. 136. 143.]
660     cord_individual_obj[indivial_i, :] = [ 7.  9. 136. 145.]
661     cord_individual_obj[indivial_i, :] = [ 8.  7. 136. 143.]
662     cord_individual_obj[indivial_i, :] = [ 9.  6. 125. 131.]
663     cord_individual_obj[indivial_i, :] = [ 10. 8. 175. 183.]
664     cord_individual_obj[indivial_i, :] = [ 11. 7. 101. 108.]
665     cord_individual_obj[indivial_i, :] = [ 12. 6. 111. 117.]
666     cord_individual_obj[indivial_i, :] = [ 13. 6. 112. 118.]
667     cord_individual_obj[indivial_i, :] = [ 14. 7. 142. 149.]
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668 cord_individual_obj[indivial_i,:] = [ 15. 7. 164. 171.]
669 cord_individual_obj[indivial_i,:] = [ 16. 6. 124. 130.]
670 cord_individual_obj[indivial_i,:] = [ 17. 7. 136. 143.]
671 cord_individual_obj[indivial_i,:] = [ 18. 7. 197. 204.]
672 cord_individual_obj[indivial_i,:] = [ 19. 7. 188. 195.]
673 cord_individual_obj[indivial_i,:] = [ 20. 8. 126. 134.]
674 cord_individual_obj[indivial_i,:] = [ 21. 7. 166. 173.]
675 cord_individual_obj[indivial_i,:] = [ 22. 9. 165. 174.]
676 cord_individual_obj[indivial_i,:] = [ 23. 6. 142. 148.]
677 cord_individual_obj[indivial_i,:] = [ 24. 7. 150. 157.]
678
679 min(cord_individual_obj[:, 3]) = 75.0
680 historl_G_best_iter[iter, 3] = 75.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 166.0
689 Proportion_of_area = 0.1537037037037037
690 BEST_CHROM =
691 berth: [ 5.5 2. 18.5 2. 13.5 22.5 3.5 6. 10.5 21. 27. 10. 15.5 10.
692 27.5]
693 time: [0. 4. 0. 0. 4. 0. 3. 4. 0. 3. 2. 2. 0. 4. 0.]
694 num_QC: [2. 3. 2. 2. 2. 4. 3. 6. 4. 1. 4. 3. 4. 2.]
695 Objective function values and some other indicators:
696 Obj0 = 7.00          Obj1 = 68.00        Obj0 + Obj1 = 75.00
697 Total movement of crane: 20.00
698 Total waiting time in berth position: 26.00
699 Total index of q during berthing: 866.00
700 Specific arrangement for each vessel:
701 V_id: 0      li: 3.0           xi: 5.5       bow of i: 4.0           tail of i: 7.0          gama_i0: 0.0           gama_i1: 2.0
702 120.0       work load gap_i: 0   gama_i1 + 1: 3.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0    demand_i: 120.0        work load_i:
703 V_id: 1      li: 4.0           xi: 2.0       bow of i: 0.0           tail of i: 4.0          gama_i0: 4.0           gama_i1: 6.0
704 140.0       work load gap_i: 0   gama_i1 + 1: 7.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0    demand_i: 140.0        work load_i:
705 V_id: 2      li: 3.0           xi: 18.5      bow of i: 17.0          tail of i: 20.0         gama_i0: 0.0           gama_i1: 1
706 .0          load_i: 80.0       gama_i1 + 1: 2.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0    demand_i: 80.0          work
707 V_id: 3      li: 4.0           xi: 2.0       bow of i: 0.0           tail of i: 4.0          gama_i0: 0.0           gama_i1: 2.0
708 100.0       work load gap_i: 0   gama_i1 + 1: 3.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0    demand_i: 100.0         work load_i:
709 V_id: 4      li: 3.0           xi: 13.5      bow of i: 12.0          tail of i: 15.0         gama_i0: 4.0           gama_i1: 7
710 .0          load_i: 140.0      gama_i1 + 1: 8.0   gama_i1 - gama_i0: 3.0   duration_time_i: 4.0    demand_i: 140.0         work
711 V_id: 5      li: 5.0           xi: 22.5      bow of i: 20.0          tail of i: 25.0         gama_i0: 0.0           gama_i1: 2
712 .0          load_i: 120.0      gama_i1 + 1: 3.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0    demand_i: 120.0         work
713 V_id: 6      li: 7.0           xi: 3.5       bow of i: 0.0           tail of i: 7.0          gama_i0: 3.0           gama_i1: 3.0
714 80.0       work load gap_i: 0   gama_i1 + 1: 4.0   gama_i1 - gama_i0: 0.0   duration_time_i: 1.0    demand_i: 80.0          work load_i:
715 V_id: 7      li: 4.0           xi: 6.0       bow of i: 4.0           tail of i: 8.0          gama_i0: 4.0           gama_i1: 5.0
716 120.0       work load gap_i: 0   gama_i1 + 1: 6.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0    demand_i: 120.0         work load_i:
717 V_id: 8      li: 7.0           xi: 10.5      bow of i: 7.0           tail of i: 14.0         gama_i0: 0.0           gama_i1: 1
718 .0          load_i: 160.0      gama_i1 + 1: 2.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0    demand_i: 160.0         work
719 V_id: 9      li: 8.0           xi: 21.0      bow of i: 17.0          tail of i: 25.0         gama_i0: 3.0           gama_i1: 3
720 .0          load_i: 80.0       gama_i1 + 1: 4.0   gama_i1 - gama_i0: 0.0   duration_time_i: 1.0    demand_i: 80.0          work
721 V_id: 10     li: 4.0           xi: 27.0      bow of i: 25.0          tail of i: 29.0         gama_i0: 2.0           gama_i1: 1
722 : 5.0        load_i: 80.0      gama_i1 + 1: 6.0   gama_i1 - gama_i0: 3.0   duration_time_i: 4.0    demand_i: 80.0          work
723 V_id: 11     li: 6.0           xi: 10.0      bow of i: 7.0           tail of i: 13.0         gama_i0: 2.0           gama_i1: 1
724 : 3.0        load_i: 160.0      gama_i1 + 1: 4.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0    demand_i: 160.0         work
725 V_id: 12     li: 3.0           xi: 15.5      bow of i: 14.0          tail of i: 17.0         gama_i0: 0.0           gama_i1: 1
726 : 2.0        load_i: 140.0      gama_i1 + 1: 3.0   gama_i1 - gama_i0: 2.0   duration_time_i: 3.0    demand_i: 140.0         work
727 V_id: 13     li: 4.0           xi: 10.0      bow of i: 8.0           tail of i: 12.0         gama_i0: 4.0           gama_i1: 1
728 : 5.0        load_i: 100.0      gama_i1 + 1: 6.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0    demand_i: 100.0         work
729 V_id: 14     li: 5.0           xi: 27.5      bow of i: 25.0          tail of i: 30.0         gama_i0: 0.0           gama_i1: 1
730 : 1.0        load_i: 60.0       gama_i1 + 1: 2.0   gama_i1 - gama_i0: 1.0   duration_time_i: 2.0    demand_i: 60.0          work
731
732 Algorithm finished and the total CPU time: 450 s
733 End
734

```