

unknown

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80 cord_individual_obj[indivial_i,:] = [ 16. 13. 133. 146.]
81 cord_individual_obj[indivial_i,:] = [ 17. 12. 128. 140.]
82 cord_individual_obj[indivial_i,:] = [ 18. 11. 149. 160.]
83 cord_individual_obj[indivial_i,:] = [ 19. 11. 120. 131.]
84 cord_individual_obj[indivial_i,:] = [ 20. 13. 111. 124.]
85 cord_individual_obj[indivial_i,:] = [ 21. 10. 126. 136.]
86 cord_individual_obj[indivial_i,:] = [ 22. 11. 167. 178.]
87 cord_individual_obj[indivial_i,:] = [ 23. 13. 129. 142.]
88 cord_individual_obj[indivial_i,:] = [ 24. 12. 142. 154.]
89
90 min(cord_individual_obj[:,3]) = 104.0
91 historl_G_best_iter[iter,3] = 104.0
92 Begin iteration:
93
94 iter = 2
95 cord_individual_obj[indivial_i,:] = [ 0. 10. 164. 174.]
96 cord_individual_obj[indivial_i,:] = [ 1. 14. 151. 165.]
97 cord_individual_obj[indivial_i,:] = [ 2. 11. 127. 138.]
98 cord_individual_obj[indivial_i,:] = [ 3. 12. 127. 139.]
99 cord_individual_obj[indivial_i,:] = [ 4. 13. 133. 146.]
100 cord_individual_obj[indivial_i,:] = [ 5. 11. 130. 141.]
101 cord_individual_obj[indivial_i,:] = [ 6. 13. 128. 141.]
102 cord_individual_obj[indivial_i,:] = [ 7. 10. 94. 104.]
103 cord_individual_obj[indivial_i,:] = [ 8. 11. 109. 120.]
104 cord_individual_obj[indivial_i,:] = [ 9. 10. 105. 115.]
105 cord_individual_obj[indivial_i,:] = [ 10. 13. 138. 151.]
106 cord_individual_obj[indivial_i,:] = [ 11. 9. 119. 128.]
107 cord_individual_obj[indivial_i,:] = [ 12. 13. 138. 151.]
108 cord_individual_obj[indivial_i,:] = [ 13. 11. 93. 104.]
109 cord_individual_obj[indivial_i,:] = [ 14. 10. 99. 109.]
110 cord_individual_obj[indivial_i,:] = [ 15. 10. 126. 136.]
111 cord_individual_obj[indivial_i,:] = [ 16. 11. 134. 145.]
112 cord_individual_obj[indivial_i,:] = [ 17. 12. 131. 143.]
113 cord_individual_obj[indivial_i,:] = [ 18. 10. 137. 147.]
114 cord_individual_obj[indivial_i,:] = [ 19. 11. 98. 109.]
115 cord_individual_obj[indivial_i,:] = [ 20. 14. 158. 172.]
116 cord_individual_obj[indivial_i,:] = [ 21. 10. 162. 172.]
117 cord_individual_obj[indivial_i,:] = [ 22. 12. 151. 163.]
118 cord_individual_obj[indivial_i,:] = [ 23. 11. 138. 149.]
119 cord_individual_obj[indivial_i,:] = [ 24. 10. 120. 130.]
120
121 min(cord_individual_obj[:,3]) = 104.0
122 historl_G_best_iter[iter,3] = 104.0
123 Begin iteration:
124
125 iter = 3
126 cord_individual_obj[indivial_i,:] = [ 0. 10. 94. 104.]
127 cord_individual_obj[indivial_i,:] = [ 1. 13. 152. 165.]
128 cord_individual_obj[indivial_i,:] = [ 2. 13. 132. 145.]
129 cord_individual_obj[indivial_i,:] = [ 3. 13. 141. 154.]
130 cord_individual_obj[indivial_i,:] = [ 4. 12. 107. 119.]
131 cord_individual_obj[indivial_i,:] = [ 5. 12. 170. 182.]
132 cord_individual_obj[indivial_i,:] = [ 6. 10. 89. 99.]
133 cord_individual_obj[indivial_i,:] = [ 7. 12. 136. 148.]
134 cord_individual_obj[indivial_i,:] = [ 8. 11. 102. 113.]
135 cord_individual_obj[indivial_i,:] = [ 9. 11. 118. 129.]
136 cord_individual_obj[indivial_i,:] = [ 10. 13. 92. 105.]
137 cord_individual_obj[indivial_i,:] = [ 11. 12. 157. 169.]
138 cord_individual_obj[indivial_i,:] = [ 12. 13. 117. 130.]
139 cord_individual_obj[indivial_i,:] = [ 13. 13. 111. 124.]
140 cord_individual_obj[indivial_i,:] = [ 14. 11. 95. 106.]
141 cord_individual_obj[indivial_i,:] = [ 15. 11. 89. 100.]
142 cord_individual_obj[indivial_i,:] = [ 16. 13. 121. 134.]
143 cord_individual_obj[indivial_i,:] = [ 17. 12. 132. 144.]
144 cord_individual_obj[indivial_i,:] = [ 18. 12. 158. 170.]
145 cord_individual_obj[indivial_i,:] = [ 19. 11. 174. 185.]
146 cord_individual_obj[indivial_i,:] = [ 20. 15. 146. 161.]
147 cord_individual_obj[indivial_i,:] = [ 21. 11. 117. 128.]
148 cord_individual_obj[indivial_i,:] = [ 22. 12. 163. 175.]
149 cord_individual_obj[indivial_i,:] = [ 23. 13. 147. 160.]
150 cord_individual_obj[indivial_i,:] = [ 24. 11. 185. 196.]
151
152 min(cord_individual_obj[:,3]) = 99.0
153 historl_G_best_iter[iter,3] = 99.0
154 Begin iteration:
155
156 iter = 4
157 cord_individual_obj[indivial_i,:] = [ 0. 15. 114. 129.]
158 cord_individual_obj[indivial_i,:] = [ 1. 12. 120. 132.]
159 cord_individual_obj[indivial_i,:] = [ 2. 10. 138. 148.]
160 cord_individual_obj[indivial_i,:] = [ 3. 12. 129. 141.]
161 cord_individual_obj[indivial_i,:] = [ 4. 13. 149. 162.]
162 cord_individual_obj[indivial_i,:] = [ 5. 12. 237. 249.]
163 cord_individual_obj[indivial_i,:] = [ 6. 13. 115. 128.]

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164 cord_individual_obj[indivial_i,:] = [ 7. 11. 123. 134.]
165 cord_individual_obj[indivial_i,:] = [ 8. 14. 167. 181.]
166 cord_individual_obj[indivial_i,:] = [ 9. 14. 131. 145.]
167 cord_individual_obj[indivial_i,:] = [ 10. 12. 177. 189.]
168 cord_individual_obj[indivial_i,:] = [ 11. 12. 102. 114.]
169 cord_individual_obj[indivial_i,:] = [ 12. 14. 148. 162.]
170 cord_individual_obj[indivial_i,:] = [ 13. 11. 174. 185.]
171 cord_individual_obj[indivial_i,:] = [ 14. 11. 182. 193.]
172 cord_individual_obj[indivial_i,:] = [ 15. 11. 97. 108.]
173 cord_individual_obj[indivial_i,:] = [ 16. 13. 149. 162.]
174 cord_individual_obj[indivial_i,:] = [ 17. 11. 101. 112.]
175 cord_individual_obj[indivial_i,:] = [ 18. 11. 120. 131.]
176 cord_individual_obj[indivial_i,:] = [ 19. 12. 153. 165.]
177 cord_individual_obj[indivial_i,:] = [ 20. 13. 155. 168.]
178 cord_individual_obj[indivial_i,:] = [ 21. 12. 130. 142.]
179 cord_individual_obj[indivial_i,:] = [ 22. 14. 146. 160.]
180 cord_individual_obj[indivial_i,:] = [ 23. 9. 211. 220.]
181 cord_individual_obj[indivial_i,:] = [ 24. 10. 89. 99.]
182
183 min(cord_individual_obj[:,3]) = 99.0
184 historl_G_best_iter[iter,3] = 99.0
185 Begin iteration:
186
187 iter = 5
188 cord_individual_obj[indivial_i,:] = [ 0. 11. 159. 170.]
189 cord_individual_obj[indivial_i,:] = [ 1. 10. 135. 145.]
190 cord_individual_obj[indivial_i,:] = [ 2. 9. 179. 188.]
191 cord_individual_obj[indivial_i,:] = [ 3. 11. 119. 130.]
192 cord_individual_obj[indivial_i,:] = [ 4. 11. 139. 150.]
193 cord_individual_obj[indivial_i,:] = [ 5. 10. 89. 99.]
194 cord_individual_obj[indivial_i,:] = [ 6. 11. 139. 150.]
195 cord_individual_obj[indivial_i,:] = [ 7. 11. 128. 139.]
196 cord_individual_obj[indivial_i,:] = [ 8. 11. 127. 138.]
197 cord_individual_obj[indivial_i,:] = [ 9. 11. 104. 115.]
198 cord_individual_obj[indivial_i,:] = [ 10. 12. 123. 135.]
199 cord_individual_obj[indivial_i,:] = [ 11. 11. 114. 125.]
200 cord_individual_obj[indivial_i,:] = [ 12. 11. 147. 158.]
201 cord_individual_obj[indivial_i,:] = [ 13. 10. 98. 108.]
202 cord_individual_obj[indivial_i,:] = [ 14. 11. 118. 129.]
203 cord_individual_obj[indivial_i,:] = [ 15. 12. 107. 119.]
204 cord_individual_obj[indivial_i,:] = [ 16. 13. 114. 127.]
205 cord_individual_obj[indivial_i,:] = [ 17. 13. 114. 127.]
206 cord_individual_obj[indivial_i,:] = [ 18. 12. 136. 148.]
207 cord_individual_obj[indivial_i,:] = [ 19. 10. 156. 166.]
208 cord_individual_obj[indivial_i,:] = [ 20. 11. 141. 152.]
209 cord_individual_obj[indivial_i,:] = [ 21. 11. 116. 127.]
210 cord_individual_obj[indivial_i,:] = [ 22. 12. 101. 113.]
211 cord_individual_obj[indivial_i,:] = [ 23. 11. 141. 152.]
212 cord_individual_obj[indivial_i,:] = [ 24. 14. 148. 162.]
213
214 min(cord_individual_obj[:,3]) = 99.0
215 historl_G_best_iter[iter,3] = 99.0
216 Begin iteration:
217
218 iter = 6
219 cord_individual_obj[indivial_i,:] = [ 0. 14. 155. 169.]
220 cord_individual_obj[indivial_i,:] = [ 1. 13. 193. 206.]
221 cord_individual_obj[indivial_i,:] = [ 2. 10. 89. 99.]
222 cord_individual_obj[indivial_i,:] = [ 3. 12. 134. 146.]
223 cord_individual_obj[indivial_i,:] = [ 4. 11. 153. 164.]
224 cord_individual_obj[indivial_i,:] = [ 5. 12. 133. 145.]
225 cord_individual_obj[indivial_i,:] = [ 6. 11. 177. 188.]
226 cord_individual_obj[indivial_i,:] = [ 7. 14. 104. 118.]
227 cord_individual_obj[indivial_i,:] = [ 8. 13. 132. 145.]
228 cord_individual_obj[indivial_i,:] = [ 9. 13. 145. 158.]
229 cord_individual_obj[indivial_i,:] = [ 10. 11. 137. 148.]
230 cord_individual_obj[indivial_i,:] = [ 11. 13. 166. 179.]
231 cord_individual_obj[indivial_i,:] = [ 12. 12. 132. 144.]
232 cord_individual_obj[indivial_i,:] = [ 13. 11. 127. 138.]
233 cord_individual_obj[indivial_i,:] = [ 14. 12. 197. 209.]
234 cord_individual_obj[indivial_i,:] = [ 15. 14. 142. 156.]
235 cord_individual_obj[indivial_i,:] = [ 16. 11. 113. 124.]
236 cord_individual_obj[indivial_i,:] = [ 17. 13. 134. 147.]
237 cord_individual_obj[indivial_i,:] = [ 18. 16. 137. 153.]
238 cord_individual_obj[indivial_i,:] = [ 19. 13. 133. 146.]
239 cord_individual_obj[indivial_i,:] = [ 20. 12. 213. 225.]
240 cord_individual_obj[indivial_i,:] = [ 21. 13. 123. 136.]
241 cord_individual_obj[indivial_i,:] = [ 22. 12. 156. 168.]
242 cord_individual_obj[indivial_i,:] = [ 23. 12. 262. 274.]
243 cord_individual_obj[indivial_i,:] = [ 24. 11. 102. 113.]
244
245 min(cord_individual_obj[:,3]) = 99.0
246 historl_G_best_iter[iter,3] = 99.0
247 Begin iteration:

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248
249 iter = 7
250 cord_individual_obj[indivial_i, :] = [ 0. 14. 150. 164.]
251 cord_individual_obj[indivial_i, :] = [ 1. 14. 176. 190.]
252 cord_individual_obj[indivial_i, :] = [ 2. 10. 141. 151.]
253 cord_individual_obj[indivial_i, :] = [ 3. 12. 139. 151.]
254 cord_individual_obj[indivial_i, :] = [ 4. 12. 148. 160.]
255 cord_individual_obj[indivial_i, :] = [ 5. 11. 145. 156.]
256 cord_individual_obj[indivial_i, :] = [ 6. 10. 187. 197.]
257 cord_individual_obj[indivial_i, :] = [ 7. 13. 120. 133.]
258 cord_individual_obj[indivial_i, :] = [ 8. 12. 111. 123.]
259 cord_individual_obj[indivial_i, :] = [ 9. 13. 157. 170.]
260 cord_individual_obj[indivial_i, :] = [ 10. 14. 147. 161.]
261 cord_individual_obj[indivial_i, :] = [ 11. 11. 119. 130.]
262 cord_individual_obj[indivial_i, :] = [ 12. 14. 201. 215.]
263 cord_individual_obj[indivial_i, :] = [ 13. 12. 173. 185.]
264 cord_individual_obj[indivial_i, :] = [ 14. 11. 105. 116.]
265 cord_individual_obj[indivial_i, :] = [ 15. 13. 109. 122.]
266 cord_individual_obj[indivial_i, :] = [ 16. 10. 129. 139.]
267 cord_individual_obj[indivial_i, :] = [ 17. 16. 145. 161.]
268 cord_individual_obj[indivial_i, :] = [ 18. 14. 108. 122.]
269 cord_individual_obj[indivial_i, :] = [ 19. 13. 129. 142.]
270 cord_individual_obj[indivial_i, :] = [ 20. 10. 149. 159.]
271 cord_individual_obj[indivial_i, :] = [ 21. 14. 135. 149.]
272 cord_individual_obj[indivial_i, :] = [ 22. 11. 128. 139.]
273 cord_individual_obj[indivial_i, :] = [ 23. 10. 89. 99.]
274 cord_individual_obj[indivial_i, :] = [ 24. 12. 117. 129.]
275

276 min(cord_individual_obj[:, 3]) = 99.0
277 historl_G_best_iter[iter, 3] = 99.0
278 Begin iteration:
279
280 iter = 8
281 cord_individual_obj[indivial_i, :] = [ 0. 12. 125. 137.]
282 cord_individual_obj[indivial_i, :] = [ 1. 13. 138. 151.]
283 cord_individual_obj[indivial_i, :] = [ 2. 12. 150. 162.]
284 cord_individual_obj[indivial_i, :] = [ 3. 13. 108. 121.]
285 cord_individual_obj[indivial_i, :] = [ 4. 13. 147. 160.]
286 cord_individual_obj[indivial_i, :] = [ 5. 11. 127. 138.]
287 cord_individual_obj[indivial_i, :] = [ 6. 12. 127. 139.]
288 cord_individual_obj[indivial_i, :] = [ 7. 12. 136. 148.]
289 cord_individual_obj[indivial_i, :] = [ 8. 11. 138. 149.]
290 cord_individual_obj[indivial_i, :] = [ 9. 13. 106. 119.]
291 cord_individual_obj[indivial_i, :] = [ 10. 14. 138. 152.]
292 cord_individual_obj[indivial_i, :] = [ 11. 11. 147. 158.]
293 cord_individual_obj[indivial_i, :] = [ 12. 10. 89. 99.]
294 cord_individual_obj[indivial_i, :] = [ 13. 9. 142. 151.]
295 cord_individual_obj[indivial_i, :] = [ 14. 12. 199. 211.]
296 cord_individual_obj[indivial_i, :] = [ 15. 13. 138. 151.]
297 cord_individual_obj[indivial_i, :] = [ 16. 11. 140. 151.]
298 cord_individual_obj[indivial_i, :] = [ 17. 15. 141. 156.]
299 cord_individual_obj[indivial_i, :] = [ 18. 12. 143. 155.]
300 cord_individual_obj[indivial_i, :] = [ 19. 11. 117. 128.]
301 cord_individual_obj[indivial_i, :] = [ 20. 13. 148. 161.]
302 cord_individual_obj[indivial_i, :] = [ 21. 13. 168. 181.]
303 cord_individual_obj[indivial_i, :] = [ 22. 14. 140. 154.]
304 cord_individual_obj[indivial_i, :] = [ 23. 13. 235. 248.]
305 cord_individual_obj[indivial_i, :] = [ 24. 12. 147. 159.]
306

307 min(cord_individual_obj[:, 3]) = 99.0
308 historl_G_best_iter[iter, 3] = 99.0
309 Begin iteration:
310
311 iter = 9
312 cord_individual_obj[indivial_i, :] = [ 0. 10. 130. 140.]
313 cord_individual_obj[indivial_i, :] = [ 1. 14. 106. 120.]
314 cord_individual_obj[indivial_i, :] = [ 2. 9. 167. 176.]
315 cord_individual_obj[indivial_i, :] = [ 3. 12. 111. 123.]
316 cord_individual_obj[indivial_i, :] = [ 4. 11. 112. 123.]
317 cord_individual_obj[indivial_i, :] = [ 5. 13. 151. 164.]
318 cord_individual_obj[indivial_i, :] = [ 6. 12. 124. 136.]
319 cord_individual_obj[indivial_i, :] = [ 7. 11. 174. 185.]
320 cord_individual_obj[indivial_i, :] = [ 8. 11. 137. 148.]
321 cord_individual_obj[indivial_i, :] = [ 9. 12. 178. 190.]
322 cord_individual_obj[indivial_i, :] = [ 10. 11. 199. 210.]
323 cord_individual_obj[indivial_i, :] = [ 11. 11. 147. 158.]
324 cord_individual_obj[indivial_i, :] = [ 12. 13. 147. 160.]
325 cord_individual_obj[indivial_i, :] = [ 13. 11. 120. 131.]
326 cord_individual_obj[indivial_i, :] = [ 14. 13. 191. 204.]
327 cord_individual_obj[indivial_i, :] = [ 15. 10. 146. 156.]
328 cord_individual_obj[indivial_i, :] = [ 16. 12. 137. 149.]
329 cord_individual_obj[indivial_i, :] = [ 17. 12. 145. 157.]
330 cord_individual_obj[indivial_i, :] = [ 18. 12. 154. 166.]
331 cord_individual_obj[indivial_i, :] = [ 19. 11. 101. 112.]

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332 cord_individual_obj[indivial_i, :] = [ 20. 13. 121. 134.]
333 cord_individual_obj[indivial_i, :] = [ 21. 11. 138. 149.]
334 cord_individual_obj[indivial_i, :] = [ 22. 12. 119. 131.]
335 cord_individual_obj[indivial_i, :] = [ 23. 10. 89. 99.]
336 cord_individual_obj[indivial_i, :] = [ 24. 12. 114. 126.]
337
338 min(cord_individual_obj[:, 3]) = 99.0
339 histol_G_best_iter[iter, 3] = 99.0
340 Begin iteration:
341
342 iter = 10
343 cord_individual_obj[indivial_i, :] = [ 0. 11. 175. 186.]
344 cord_individual_obj[indivial_i, :] = [ 1. 11. 154. 165.]
345 cord_individual_obj[indivial_i, :] = [ 2. 12. 111. 123.]
346 cord_individual_obj[indivial_i, :] = [ 3. 10. 169. 179.]
347 cord_individual_obj[indivial_i, :] = [ 4. 14. 108. 122.]
348 cord_individual_obj[indivial_i, :] = [ 5. 11. 119. 130.]
349 cord_individual_obj[indivial_i, :] = [ 6. 11. 197. 208.]
350 cord_individual_obj[indivial_i, :] = [ 7. 12. 116. 128.]
351 cord_individual_obj[indivial_i, :] = [ 8. 11. 155. 166.]
352 cord_individual_obj[indivial_i, :] = [ 9. 11. 152. 163.]
353 cord_individual_obj[indivial_i, :] = [10. 10. 89. 99.]
354 cord_individual_obj[indivial_i, :] = [11. 10. 123. 133.]
355 cord_individual_obj[indivial_i, :] = [12. 15. 127. 142.]
356 cord_individual_obj[indivial_i, :] = [13. 11. 146. 157.]
357 cord_individual_obj[indivial_i, :] = [14. 11. 119. 130.]
358 cord_individual_obj[indivial_i, :] = [15. 9. 153. 162.]
359 cord_individual_obj[indivial_i, :] = [16. 11. 134. 145.]
360 cord_individual_obj[indivial_i, :] = [17. 12. 121. 133.]
361 cord_individual_obj[indivial_i, :] = [18. 11. 127. 138.]
362 cord_individual_obj[indivial_i, :] = [19. 14. 129. 143.]
363 cord_individual_obj[indivial_i, :] = [20. 10. 92. 102.]
364 cord_individual_obj[indivial_i, :] = [21. 10. 125. 135.]
365 cord_individual_obj[indivial_i, :] = [22. 13. 130. 143.]
366 cord_individual_obj[indivial_i, :] = [23. 11. 129. 140.]
367 cord_individual_obj[indivial_i, :] = [24. 12. 139. 151.]
368
369 min(cord_individual_obj[:, 3]) = 99.0
370 histol_G_best_iter[iter, 3] = 99.0
371 Begin iteration:
372
373 iter = 11
374 cord_individual_obj[indivial_i, :] = [ 0. 12. 133. 145.]
375 cord_individual_obj[indivial_i, :] = [ 1. 13. 193. 206.]
376 cord_individual_obj[indivial_i, :] = [ 2. 10. 138. 148.]
377 cord_individual_obj[indivial_i, :] = [ 3. 13. 148. 161.]
378 cord_individual_obj[indivial_i, :] = [ 4. 11. 148. 159.]
379 cord_individual_obj[indivial_i, :] = [ 5. 11. 152. 163.]
380 cord_individual_obj[indivial_i, :] = [ 6. 10. 89. 99.]
381 cord_individual_obj[indivial_i, :] = [ 7. 11. 145. 156.]
382 cord_individual_obj[indivial_i, :] = [ 8. 14. 188. 202.]
383 cord_individual_obj[indivial_i, :] = [ 9. 14. 130. 144.]
384 cord_individual_obj[indivial_i, :] = [10. 12. 127. 139.]
385 cord_individual_obj[indivial_i, :] = [11. 10. 121. 131.]
386 cord_individual_obj[indivial_i, :] = [12. 14. 174. 188.]
387 cord_individual_obj[indivial_i, :] = [13. 10. 154. 164.]
388 cord_individual_obj[indivial_i, :] = [14. 11. 157. 168.]
389 cord_individual_obj[indivial_i, :] = [15. 11. 149. 160.]
390 cord_individual_obj[indivial_i, :] = [16. 12. 112. 124.]
391 cord_individual_obj[indivial_i, :] = [17. 14. 156. 170.]
392 cord_individual_obj[indivial_i, :] = [18. 14. 156. 170.]
393 cord_individual_obj[indivial_i, :] = [19. 12. 120. 132.]
394 cord_individual_obj[indivial_i, :] = [20. 11. 143. 154.]
395 cord_individual_obj[indivial_i, :] = [21. 11. 163. 174.]
396 cord_individual_obj[indivial_i, :] = [22. 14. 196. 210.]
397 cord_individual_obj[indivial_i, :] = [23. 12. 132. 144.]
398 cord_individual_obj[indivial_i, :] = [24. 14. 115. 129.]
399
400 min(cord_individual_obj[:, 3]) = 99.0
401 histol_G_best_iter[iter, 3] = 99.0
402 Begin iteration:
403
404 iter = 12
405 cord_individual_obj[indivial_i, :] = [ 0. 13. 153. 166.]
406 cord_individual_obj[indivial_i, :] = [ 1. 12. 110. 122.]
407 cord_individual_obj[indivial_i, :] = [ 2. 11. 168. 179.]
408 cord_individual_obj[indivial_i, :] = [ 3. 11. 96. 107.]
409 cord_individual_obj[indivial_i, :] = [ 4. 13. 192. 205.]
410 cord_individual_obj[indivial_i, :] = [ 5. 11. 168. 179.]
411 cord_individual_obj[indivial_i, :] = [ 6. 10. 150. 160.]
412 cord_individual_obj[indivial_i, :] = [ 7. 11. 156. 167.]
413 cord_individual_obj[indivial_i, :] = [ 8. 12. 170. 182.]
414 cord_individual_obj[indivial_i, :] = [ 9. 13. 132. 145.]
415 cord_individual_obj[indivial_i, :] = [10. 12. 146. 158.]

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416 cord_individual_obj[indivial_i,:] = [ 11. 12. 121. 133.]
417 cord_individual_obj[indivial_i,:] = [ 12. 13. 143. 156.]
418 cord_individual_obj[indivial_i,:] = [ 13. 10. 95. 105.]
419 cord_individual_obj[indivial_i,:] = [ 14. 13. 119. 132.]
420 cord_individual_obj[indivial_i,:] = [ 15. 11. 109. 120.]
421 cord_individual_obj[indivial_i,:] = [ 16. 13. 157. 170.]
422 cord_individual_obj[indivial_i,:] = [ 17. 11. 176. 187.]
423 cord_individual_obj[indivial_i,:] = [ 18. 12. 142. 154.]
424 cord_individual_obj[indivial_i,:] = [ 19. 10. 111. 121.]
425 cord_individual_obj[indivial_i,:] = [ 20. 10. 96. 106.]
426 cord_individual_obj[indivial_i,:] = [ 21. 11. 146. 157.]
427 cord_individual_obj[indivial_i,:] = [ 22. 10. 89. 99.]
428 cord_individual_obj[indivial_i,:] = [ 23. 11. 137. 148.]
429 cord_individual_obj[indivial_i,:] = [ 24. 12. 160. 172.]
430
431 min(cord_individual_obj[:,3]) = 99.0
432 histol_G_best_iter[iter,3] = 99.0
433 Begin iteration:
434
435 iter = 13
436 cord_individual_obj[indivial_i,:] = [ 0. 15. 161. 176.]
437 cord_individual_obj[indivial_i,:] = [ 1. 14. 162. 176.]
438 cord_individual_obj[indivial_i,:] = [ 2. 10. 157. 167.]
439 cord_individual_obj[indivial_i,:] = [ 3. 14. 138. 152.]
440 cord_individual_obj[indivial_i,:] = [ 4. 10. 89. 99.]
441 cord_individual_obj[indivial_i,:] = [ 5. 13. 177. 190.]
442 cord_individual_obj[indivial_i,:] = [ 6. 14. 111. 125.]
443 cord_individual_obj[indivial_i,:] = [ 7. 11. 123. 134.]
444 cord_individual_obj[indivial_i,:] = [ 8. 11. 170. 181.]
445 cord_individual_obj[indivial_i,:] = [ 9. 14. 112. 126.]
446 cord_individual_obj[indivial_i,:] = [ 10. 13. 180. 193.]
447 cord_individual_obj[indivial_i,:] = [ 11. 12. 148. 160.]
448 cord_individual_obj[indivial_i,:] = [ 12. 13. 137. 150.]
449 cord_individual_obj[indivial_i,:] = [ 13. 10. 119. 129.]
450 cord_individual_obj[indivial_i,:] = [ 14. 11. 158. 169.]
451 cord_individual_obj[indivial_i,:] = [ 15. 13. 131. 144.]
452 cord_individual_obj[indivial_i,:] = [ 16. 11. 135. 146.]
453 cord_individual_obj[indivial_i,:] = [ 17. 13. 143. 156.]
454 cord_individual_obj[indivial_i,:] = [ 18. 13. 149. 162.]
455 cord_individual_obj[indivial_i,:] = [ 19. 10. 153. 163.]
456 cord_individual_obj[indivial_i,:] = [ 20. 13. 136. 149.]
457 cord_individual_obj[indivial_i,:] = [ 21. 13. 152. 165.]
458 cord_individual_obj[indivial_i,:] = [ 22. 12. 127. 139.]
459 cord_individual_obj[indivial_i,:] = [ 23. 13. 215. 228.]
460 cord_individual_obj[indivial_i,:] = [ 24. 13. 105. 118.]
461
462 min(cord_individual_obj[:,3]) = 99.0
463 histol_G_best_iter[iter,3] = 99.0
464 Begin iteration:
465
466 iter = 14
467 cord_individual_obj[indivial_i,:] = [ 0. 12. 101. 113.]
468 cord_individual_obj[indivial_i,:] = [ 1. 12. 183. 195.]
469 cord_individual_obj[indivial_i,:] = [ 2. 12. 166. 178.]
470 cord_individual_obj[indivial_i,:] = [ 3. 13. 138. 151.]
471 cord_individual_obj[indivial_i,:] = [ 4. 13. 208. 221.]
472 cord_individual_obj[indivial_i,:] = [ 5. 13. 117. 130.]
473 cord_individual_obj[indivial_i,:] = [ 6. 11. 120. 131.]
474 cord_individual_obj[indivial_i,:] = [ 7. 12. 115. 127.]
475 cord_individual_obj[indivial_i,:] = [ 8. 12. 188. 200.]
476 cord_individual_obj[indivial_i,:] = [ 9. 14. 121. 135.]
477 cord_individual_obj[indivial_i,:] = [ 10. 12. 113. 125.]
478 cord_individual_obj[indivial_i,:] = [ 11. 11. 146. 157.]
479 cord_individual_obj[indivial_i,:] = [ 12. 12. 182. 194.]
480 cord_individual_obj[indivial_i,:] = [ 13. 11. 153. 164.]
481 cord_individual_obj[indivial_i,:] = [ 14. 12. 159. 171.]
482 cord_individual_obj[indivial_i,:] = [ 15. 11. 113. 124.]
483 cord_individual_obj[indivial_i,:] = [ 16. 10. 133. 143.]
484 cord_individual_obj[indivial_i,:] = [ 17. 14. 148. 162.]
485 cord_individual_obj[indivial_i,:] = [ 18. 11. 143. 154.]
486 cord_individual_obj[indivial_i,:] = [ 19. 14. 113. 127.]
487 cord_individual_obj[indivial_i,:] = [ 20. 11. 176. 187.]
488 cord_individual_obj[indivial_i,:] = [ 21. 12. 114. 126.]
489 cord_individual_obj[indivial_i,:] = [ 22. 13. 126. 139.]
490 cord_individual_obj[indivial_i,:] = [ 23. 10. 89. 99.]
491 cord_individual_obj[indivial_i,:] = [ 24. 11. 111. 122.]
492
493 min(cord_individual_obj[:,3]) = 99.0
494 histol_G_best_iter[iter,3] = 99.0
495 Begin iteration:
496
497 iter = 15
498 cord_individual_obj[indivial_i,:] = [ 0. 11. 134. 145.]
499 cord_individual_obj[indivial_i,:] = [ 1. 13. 162. 175.]

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500 cord_individual_obj[indivial_i, :] = [ 2. 12. 127. 139.]
501 cord_individual_obj[indivial_i, :] = [ 3. 15. 137. 152.]
502 cord_individual_obj[indivial_i, :] = [ 4. 10. 89. 99.]
503 cord_individual_obj[indivial_i, :] = [ 5. 11. 147. 158.]
504 cord_individual_obj[indivial_i, :] = [ 6. 13. 114. 127.]
505 cord_individual_obj[indivial_i, :] = [ 7. 14. 140. 154.]
506 cord_individual_obj[indivial_i, :] = [ 8. 13. 141. 154.]
507 cord_individual_obj[indivial_i, :] = [ 9. 13. 168. 181.]
508 cord_individual_obj[indivial_i, :] = [ 10. 11. 127. 138.]
509 cord_individual_obj[indivial_i, :] = [ 11. 12. 116. 128.]
510 cord_individual_obj[indivial_i, :] = [ 12. 12. 129. 141.]
511 cord_individual_obj[indivial_i, :] = [ 13. 11. 166. 177.]
512 cord_individual_obj[indivial_i, :] = [ 14. 12. 110. 122.]
513 cord_individual_obj[indivial_i, :] = [ 15. 10. 176. 186.]
514 cord_individual_obj[indivial_i, :] = [ 16. 10. 117. 127.]
515 cord_individual_obj[indivial_i, :] = [ 17. 12. 151. 163.]
516 cord_individual_obj[indivial_i, :] = [ 18. 13. 125. 138.]
517 cord_individual_obj[indivial_i, :] = [ 19. 15. 151. 166.]
518 cord_individual_obj[indivial_i, :] = [ 20. 13. 168. 181.]
519 cord_individual_obj[indivial_i, :] = [ 21. 12. 153. 165.]
520 cord_individual_obj[indivial_i, :] = [ 22. 11. 113. 124.]
521 cord_individual_obj[indivial_i, :] = [ 23. 13. 194. 207.]
522 cord_individual_obj[indivial_i, :] = [ 24. 15. 126. 141.]
523
524 min(cord_individual_obj[:, 3]) = 99.0
525 histol_G_best_iter[iter, 3] = 99.0
526 Begin iteration:
527
528 iter = 16
529 cord_individual_obj[indivial_i, :] = [ 0. 14. 119. 133.]
530 cord_individual_obj[indivial_i, :] = [ 1. 13. 149. 162.]
531 cord_individual_obj[indivial_i, :] = [ 2. 12. 166. 178.]
532 cord_individual_obj[indivial_i, :] = [ 3. 12. 129. 141.]
533 cord_individual_obj[indivial_i, :] = [ 4. 13. 119. 132.]
534 cord_individual_obj[indivial_i, :] = [ 5. 14. 167. 181.]
535 cord_individual_obj[indivial_i, :] = [ 6. 12. 155. 167.]
536 cord_individual_obj[indivial_i, :] = [ 7. 12. 106. 118.]
537 cord_individual_obj[indivial_i, :] = [ 8. 13. 140. 153.]
538 cord_individual_obj[indivial_i, :] = [ 9. 14. 124. 138.]
539 cord_individual_obj[indivial_i, :] = [ 10. 15. 148. 163.]
540 cord_individual_obj[indivial_i, :] = [ 11. 11. 145. 156.]
541 cord_individual_obj[indivial_i, :] = [ 12. 13. 141. 154.]
542 cord_individual_obj[indivial_i, :] = [ 13. 13. 138. 151.]
543 cord_individual_obj[indivial_i, :] = [ 14. 14. 116. 130.]
544 cord_individual_obj[indivial_i, :] = [ 15. 10. 97. 107.]
545 cord_individual_obj[indivial_i, :] = [ 16. 10. 105. 115.]
546 cord_individual_obj[indivial_i, :] = [ 17. 12. 122. 134.]
547 cord_individual_obj[indivial_i, :] = [ 18. 14. 104. 118.]
548 cord_individual_obj[indivial_i, :] = [ 19. 12. 131. 143.]
549 cord_individual_obj[indivial_i, :] = [ 20. 12. 180. 192.]
550 cord_individual_obj[indivial_i, :] = [ 21. 13. 157. 170.]
551 cord_individual_obj[indivial_i, :] = [ 22. 14. 157. 171.]
552 cord_individual_obj[indivial_i, :] = [ 23. 10. 89. 99.]
553 cord_individual_obj[indivial_i, :] = [ 24. 12. 125. 137.]
554
555 min(cord_individual_obj[:, 3]) = 99.0
556 histol_G_best_iter[iter, 3] = 99.0
557 Begin iteration:
558
559 iter = 17
560 cord_individual_obj[indivial_i, :] = [ 0. 11. 107. 118.]
561 cord_individual_obj[indivial_i, :] = [ 1. 12. 153. 165.]
562 cord_individual_obj[indivial_i, :] = [ 2. 10. 163. 173.]
563 cord_individual_obj[indivial_i, :] = [ 3. 12. 118. 130.]
564 cord_individual_obj[indivial_i, :] = [ 4. 13. 137. 150.]
565 cord_individual_obj[indivial_i, :] = [ 5. 11. 145. 156.]
566 cord_individual_obj[indivial_i, :] = [ 6. 12. 125. 137.]
567 cord_individual_obj[indivial_i, :] = [ 7. 12. 138. 150.]
568 cord_individual_obj[indivial_i, :] = [ 8. 11. 171. 182.]
569 cord_individual_obj[indivial_i, :] = [ 9. 13. 214. 227.]
570 cord_individual_obj[indivial_i, :] = [ 10. 12. 146. 158.]
571 cord_individual_obj[indivial_i, :] = [ 11. 13. 133. 146.]
572 cord_individual_obj[indivial_i, :] = [ 12. 13. 136. 149.]
573 cord_individual_obj[indivial_i, :] = [ 13. 15. 142. 157.]
574 cord_individual_obj[indivial_i, :] = [ 14. 11. 107. 118.]
575 cord_individual_obj[indivial_i, :] = [ 15. 13. 126. 139.]
576 cord_individual_obj[indivial_i, :] = [ 16. 13. 120. 133.]
577 cord_individual_obj[indivial_i, :] = [ 17. 12. 128. 140.]
578 cord_individual_obj[indivial_i, :] = [ 18. 11. 138. 149.]
579 cord_individual_obj[indivial_i, :] = [ 19. 12. 131. 143.]
580 cord_individual_obj[indivial_i, :] = [ 20. 10. 89. 99.]
581 cord_individual_obj[indivial_i, :] = [ 21. 11. 135. 146.]
582 cord_individual_obj[indivial_i, :] = [ 22. 11. 101. 112.]
583 cord_individual_obj[indivial_i, :] = [ 23. 12. 121. 133.]

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584     cord_individual_obj[indivial_i, :] = [ 24. 12. 113. 125.]
585
586     min(cord_individual_obj[:, 3]) = 99.0
587     historl_G_best_iter[iter, 3] = 99.0
588 Begin iteration:
589
590 iter = 18
591     cord_individual_obj[indivial_i, :] = [ 0. 12. 111. 123.]
592     cord_individual_obj[indivial_i, :] = [ 1. 11. 168. 179.]
593     cord_individual_obj[indivial_i, :] = [ 2. 13. 132. 145.]
594     cord_individual_obj[indivial_i, :] = [ 3. 14. 166. 180.]
595     cord_individual_obj[indivial_i, :] = [ 4. 16. 213. 229.]
596     cord_individual_obj[indivial_i, :] = [ 5. 12. 129. 141.]
597     cord_individual_obj[indivial_i, :] = [ 6. 11. 161. 172.]
598     cord_individual_obj[indivial_i, :] = [ 7. 11. 159. 170.]
599     cord_individual_obj[indivial_i, :] = [ 8. 13. 170. 183.]
600     cord_individual_obj[indivial_i, :] = [ 9. 10. 89. 99.]
601     cord_individual_obj[indivial_i, :] = [ 10. 13. 170. 183.]
602     cord_individual_obj[indivial_i, :] = [ 11. 11. 173. 184.]
603     cord_individual_obj[indivial_i, :] = [ 12. 13. 117. 130.]
604     cord_individual_obj[indivial_i, :] = [ 13. 10. 113. 123.]
605     cord_individual_obj[indivial_i, :] = [ 14. 14. 206. 220.]
606     cord_individual_obj[indivial_i, :] = [ 15. 11. 137. 148.]
607     cord_individual_obj[indivial_i, :] = [ 16. 14. 105. 119.]
608     cord_individual_obj[indivial_i, :] = [ 17. 12. 110. 122.]
609     cord_individual_obj[indivial_i, :] = [ 18. 13. 131. 144.]
610     cord_individual_obj[indivial_i, :] = [ 19. 13. 165. 178.]
611     cord_individual_obj[indivial_i, :] = [ 20. 14. 206. 220.]
612     cord_individual_obj[indivial_i, :] = [ 21. 15. 163. 178.]
613     cord_individual_obj[indivial_i, :] = [ 22. 13. 155. 168.]
614     cord_individual_obj[indivial_i, :] = [ 23. 10. 117. 127.]
615     cord_individual_obj[indivial_i, :] = [ 24. 13. 114. 127.]
616
617     min(cord_individual_obj[:, 3]) = 99.0
618     historl_G_best_iter[iter, 3] = 99.0
619 Begin iteration:
620
621 iter = 19
622     cord_individual_obj[indivial_i, :] = [ 0. 12. 104. 116.]
623     cord_individual_obj[indivial_i, :] = [ 1. 12. 179. 191.]
624     cord_individual_obj[indivial_i, :] = [ 2. 9. 160. 169.]
625     cord_individual_obj[indivial_i, :] = [ 3. 10. 119. 129.]
626     cord_individual_obj[indivial_i, :] = [ 4. 10. 89. 99.]
627     cord_individual_obj[indivial_i, :] = [ 5. 11. 149. 160.]
628     cord_individual_obj[indivial_i, :] = [ 6. 13. 146. 159.]
629     cord_individual_obj[indivial_i, :] = [ 7. 13. 118. 131.]
630     cord_individual_obj[indivial_i, :] = [ 8. 13. 141. 154.]
631     cord_individual_obj[indivial_i, :] = [ 9. 13. 154. 167.]
632     cord_individual_obj[indivial_i, :] = [ 10. 13. 119. 132.]
633     cord_individual_obj[indivial_i, :] = [ 11. 11. 145. 156.]
634     cord_individual_obj[indivial_i, :] = [ 12. 12. 196. 208.]
635     cord_individual_obj[indivial_i, :] = [ 13. 10. 130. 140.]
636     cord_individual_obj[indivial_i, :] = [ 14. 14. 182. 196.]
637     cord_individual_obj[indivial_i, :] = [ 15. 13. 95. 108.]
638     cord_individual_obj[indivial_i, :] = [ 16. 11. 140. 151.]
639     cord_individual_obj[indivial_i, :] = [ 17. 13. 169. 182.]
640     cord_individual_obj[indivial_i, :] = [ 18. 13. 125. 138.]
641     cord_individual_obj[indivial_i, :] = [ 19. 11. 149. 160.]
642     cord_individual_obj[indivial_i, :] = [ 20. 10. 120. 130.]
643     cord_individual_obj[indivial_i, :] = [ 21. 12. 197. 209.]
644     cord_individual_obj[indivial_i, :] = [ 22. 14. 114. 128.]
645     cord_individual_obj[indivial_i, :] = [ 23. 12. 140. 152.]
646     cord_individual_obj[indivial_i, :] = [ 24. 14. 143. 157.]
647
648     min(cord_individual_obj[:, 3]) = 99.0
649     historl_G_best_iter[iter, 3] = 99.0
650 Begin iteration:
651
652 iter = 20
653     cord_individual_obj[indivial_i, :] = [ 0. 13. 128. 141.]
654     cord_individual_obj[indivial_i, :] = [ 1. 12. 218. 230.]
655     cord_individual_obj[indivial_i, :] = [ 2. 13. 176. 189.]
656     cord_individual_obj[indivial_i, :] = [ 3. 14. 111. 125.]
657     cord_individual_obj[indivial_i, :] = [ 4. 13. 149. 162.]
658     cord_individual_obj[indivial_i, :] = [ 5. 11. 170. 181.]
659     cord_individual_obj[indivial_i, :] = [ 6. 11. 168. 179.]
660     cord_individual_obj[indivial_i, :] = [ 7. 13. 129. 142.]
661     cord_individual_obj[indivial_i, :] = [ 8. 17. 150. 167.]
662     cord_individual_obj[indivial_i, :] = [ 9. 12. 130. 142.]
663     cord_individual_obj[indivial_i, :] = [ 10. 14. 180. 194.]
664     cord_individual_obj[indivial_i, :] = [ 11. 11. 144. 155.]
665     cord_individual_obj[indivial_i, :] = [ 12. 11. 139. 150.]
666     cord_individual_obj[indivial_i, :] = [ 13. 12. 152. 164.]
667     cord_individual_obj[indivial_i, :] = [ 14. 14. 147. 161.]

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668 cord_individual_obj[indivial_i,:] = [ 15. 11. 145. 156.]
669 cord_individual_obj[indivial_i,:] = [ 16. 11. 180. 191.]
670 cord_individual_obj[indivial_i,:] = [ 17. 11. 110. 121.]
671 cord_individual_obj[indivial_i,:] = [ 18. 12. 149. 161.]
672 cord_individual_obj[indivial_i,:] = [ 19. 12. 134. 146.]
673 cord_individual_obj[indivial_i,:] = [ 20. 11. 117. 128.]
674 cord_individual_obj[indivial_i,:] = [ 21. 10. 89. 99.]
675 cord_individual_obj[indivial_i,:] = [ 22. 13. 230. 243.]
676 cord_individual_obj[indivial_i,:] = [ 23. 13. 169. 182.]
677 cord_individual_obj[indivial_i,:] = [ 24. 14. 132. 146.]
678
679 min(cord_individual_obj[:, 3]) = 99.0
680 historl_G_best_iter[iter, 3] = 99.0
681 Iteration calculate over
682
683
684
685
686 All item are in Bin and:
687 Bin area = 1080
688 Real_area = 302.0
689 Proportion_of_area = 0.2796296296296296
690 BEST_CHROM =
691 berth: [ 8.5 13.5 12. 17.5 4.5 16.5 13.5 2. 3. 25.5 9.5 25.5 3.5 18.5
692 9. 26. 6. 24.5 25. ]
693 time: [0. 9. 2. 0. 9. 6. 3. 0. 4. 0. 6. 7. 6. 3. 4. 2. 2. 5. 9.]
694 num_QC: [2. 4. 3. 2. 3. 3. 3. 2. 4. 2. 3. 3. 2. 3. 3. 3. 3. 2. 2.]
695 Objective function values and some other indicators:
696 Obj0 = 10.00      Obj1 = 89.00      Obj0 + Obj1 = 99.00
697 Total movement of crane: 12.00
698 Total waiting time in berth position: 77.00
699 Total index of q during berthing: 1054.00
700 Specific arrangement for each vessel:
701 V_id: 0          li: 9.0           xi: 8.5           bow of i: 4.0           tail of i: 13.0           gama_i0: 0.0           gama_i1: 1.0
    work load gap_i: 0           gama_i1 + 1: 2.0           gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 60.0           work load_i:
60.0
702 V_id: 1          li: 9.0           xi: 13.5          bow of i: 9.0           tail of i: 18.0           gama_i0: 9.0           gama_i1:
    work load gap_i: 0           gama_i1 + 1: 11.0           gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 140.0           work
10.0
load_i: 140.0
703 V_id: 2          li: 8.0           xi: 12.0           bow of i: 8.0           tail of i: 16.0           gama_i0: 2.0           gama_i1: 2
    work load gap_i: 0           gama_i1 + 1: 3.0           gama_i1 - gama_i0: 0.0           duration_time_i: 1.0           demand_i: 60.0           work
.0
load_i: 60.0
704 V_id: 3          li: 9.0           xi: 17.5          bow of i: 13.0           tail of i: 22.0           gama_i0: 0.0           gama_i1: 1
    work load gap_i: 0           gama_i1 + 1: 2.0           gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work
.0
load_i: 80.0
705 V_id: 4          li: 9.0           xi: 4.5            bow of i: 0.0           tail of i: 9.0           gama_i0: 9.0           gama_i1: 10.0
    work load gap_i: 0           gama_i1 + 1: 11.0           gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 100.0           work
load_i: 100.0
706 V_id: 5          li: 9.0           xi: 16.5          bow of i: 12.0           tail of i: 21.0           gama_i0: 6.0           gama_i1: 8
    work load gap_i: 0           gama_i1 + 1: 9.0           gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 160.0           work
.0
load_i: 160.0
707 V_id: 6          li: 3.0            xi: 13.5          bow of i: 12.0           tail of i: 15.0           gama_i0: 3.0           gama_i1: 4
    work load gap_i: 0           gama_i1 + 1: 5.0           gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 120.0           work
.0
load_i: 120.0
708 V_id: 7          li: 4.0            xi: 2.0            bow of i: 0.0           tail of i: 4.0           gama_i0: 0.0           gama_i1: 3.0
    work load gap_i: 0           gama_i1 + 1: 4.0           gama_i1 - gama_i0: 3.0           duration_time_i: 4.0           demand_i: 160.0           work load_i:
160.0
709 V_id: 8          li: 6.0            xi: 3.0            bow of i: 0.0           tail of i: 6.0           gama_i0: 4.0           gama_i1: 5.0
    work load gap_i: 0           gama_i1 + 1: 6.0           gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 160.0           work load_i:
160.0
710 V_id: 9          li: 7.0            xi: 25.5          bow of i: 22.0           tail of i: 29.0           gama_i0: 0.0           gama_i1: 1
    work load gap_i: 0           gama_i1 + 1: 2.0           gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 60.0           work
.0
load_i: 60.0
711 V_id: 10         li: 5.0            xi: 9.5            bow of i: 7.0           tail of i: 12.0           gama_i0: 6.0           gama_i1: 8
    work load gap_i: 0           gama_i1 + 1: 9.0           gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 160.0           work
.0
load_i: 160.0
712 V_id: 11         li: 9.0            xi: 25.5          bow of i: 21.0           tail of i: 30.0           gama_i0: 7.0           gama_i1:
    work load gap_i: 0           gama_i1 + 1: 9.0           gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 100.0           work
.0
load_i: 100.0
713 V_id: 12         li: 7.0            xi: 3.5            bow of i: 0.0           tail of i: 7.0           gama_i0: 6.0           gama_i1: 8.0
    work load gap_i: 0           gama_i1 + 1: 9.0           gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 120.0           work load_i:
120.0
714 V_id: 13         li: 7.0            xi: 18.5          bow of i: 15.0           tail of i: 22.0           gama_i0: 3.0           gama_i1:
    work load gap_i: 0           gama_i1 + 1: 6.0           gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 160.0           work
.0
load_i: 160.0
715 V_id: 14         li: 6.0            xi: 9.0            bow of i: 6.0           tail of i: 12.0           gama_i0: 4.0           gama_i1: 5
    work load gap_i: 0           gama_i1 + 1: 6.0           gama_i1 - gama_i0: 1.0           duration_time_i: 2.0           demand_i: 80.0           work
.0
load_i: 80.0
716 V_id: 15         li: 8.0            xi: 26.0          bow of i: 22.0           tail of i: 30.0           gama_i0: 2.0           gama_i1:
    work load gap_i: 0           gama_i1 + 1: 5.0           gama_i1 - gama_i0: 2.0           duration_time_i: 3.0           demand_i: 140.0           work
.0
load_i: 140.0
717 V_id: 16         li: 4.0            xi: 6.0            bow of i: 4.0           tail of i: 8.0           gama_i0: 2.0           gama_i1: 3.0
    work load gap_i: 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

```

unknown

718	V_id: 17 : 6.0 load_i: 60.0	li: 5.0 gama_i1 + 1: 7.0 work load gap_i: 0	xi: 24.5 gama_i1 - gama_i0: 1.0	bow of i: 22.0 gama_i1 - gama_i0: 1.0	tail of i: 27.0 duration_time_i: 2.0	gama_i0: 5.0 demand_i: 60.0	gama_i1 work
719	V_id: 18 : 10.0 load_i: 60.0	li: 8.0 gama_i1 + 1: 11.0 work load gap_i: 0	xi: 25.0 gama_i1 - gama_i0: 1.0	bow of i: 21.0 gama_i1 - gama_i0: 1.0	tail of i: 29.0 duration_time_i: 2.0	gama_i0: 9.0 demand_i: 60.0	gama_i1 work
720	Algorithm finished and the total CPU time: 498 s						
721	End						
722							
723							