

A. Final SRI-based one class classifier to detect anomalies in CarChallenge_stationary data

Classifier 2 classifier to distinguish normal and attack in CarChallenge2020 dataset

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1: if row['Arbitration_ID'] == '2B0' then:
2:   if row['TimeInterval'] < 0.0002098083496093375 and row['D1'] >= 237.5 then:
3:     return 'normal'
4:   else if row['DLC'] < 6.5 and row['D1'] >= 237.5 then:
5:     return 'normal'
6:   else if row['DLC'] < 6.5 and row['P_CAN_ID_164'] >= 0.5 then:
7:     return 'normal'
8:   else if row['DLC'] < 6.5 and row['N_CAN_ID_367'] >= 0.5 then:
9:     return 'normal'
10:  else if row['P_CAN_ID_251'] >= 0.5 and row['D4'] >= 50.5 then:
11:    return 'normal'
12:  else if row['P_CAN_ID_251'] >= 0.5 and row['D3'] < 7.5 then:
13:    return 'normal'
14:  else if row['TimeInterval'] < 0.0002100467681884383 and row['D3'] < 7.5 and row['D3'] >= 6.5 then:
15:    return 'normal'
16:  else
17:    return 'attack'
18: else if row['Arbitration_ID'] == '4A2' then:
19:   if row['DLC'] < 3.0 and row['N_CAN_ID_420'] >= 0.5 then:
20:     return 'normal'
21:   else if row['DLC'] < 3.0 and row['D0'] >= 8.5 then:
22:     return 'normal'
23:   else
24:     return 'attack'
25: else if row['Arbitration_ID'] == '4A7' then:
26:   if row['DLC'] < 3.0 then:
27:     return 'normal'
28:   else
29:     return 'attack'
30: else if row['Arbitration_ID'] == '4A9' then:
31:   if row['TimePeriod'] >= 0.15050506591796872 and row['P_CAN_ID_470'] >= 0.5 then:
32:     return 'normal'
33:   else if row['TimePeriod'] >= 0.15050506591796872 and row['P_CAN_ID_485'] >= 0.5 then:
34:     return 'normal'
35:   else if row['TimePeriod'] >= 0.15050506591796872 and row['P_CAN_ID_490'] >= 0.5 then:
36:     return 'normal'
37:   else if row['N_CAN_ID_53F'] >= 0.5 and row['D7'] < 0.5 then:
38:     return 'normal'
39:   else if row['TimePeriod'] >= 0.15050506591796872 and row['P_CAN_ID_453'] >= 0.5 then:
40:     return 'normal'
41:   else if row['TimePeriod'] >= 0.15050506591796872 and row['N_CAN_ID_4F1'] >= 0.5 then:
42:     return 'normal'
43:   else
44:     return 'attack'
45: else if row['Arbitration_ID'] == '4CB' then:
46:   if row['N_CAN_ID_53B'] >= 0.5 and row['P_CAN_ID_368'] >= 0.5 then:
47:     return 'normal'
48:   else if row['N_CAN_ID_53B'] >= 0.5 and row['TimeInterval'] >= 0.00024843215942381327 then:
49:     return 'normal'
50:   else if row['TimePeriod'] >= 0.19828391075134277 and row['D0'] >= 6.5 and row['D0'] < 8.5 then:
51:     return 'normal'
52:   else
53:     return 'attack'
54: else if row['Arbitration_ID'] == '4F1' then:
55:   if row['DLC'] < 4.5 and row['D2'] >= 95.5 then:
56:     return 'normal'
57:   else
58:     return 'attack'
59: else if row['Arbitration_ID'] == '5A6' then:
60:   if row['P_CAN_ID_53B'] >= 0.5 then:
61:     return 'normal'
62:   else if row['N_CAN_ID_5CD'] >= 0.5 then:
63:     return 'normal'
64:   else if row['TimePeriod'] >= 0.1500765085220337 and row['P_CAN_ID_140'] >= 0.5 then:
65:     return 'normal'
66:   else if row['TimePeriod'] >= 0.1500765085220337 and row['N_CAN_ID_47F'] >= 0.5 then:
67:     return 'normal'
68:   else if row['TimeInterval'] >= 0.00024843215942381327 and row['N_CAN_ID_5CD'] >= 0.5 then:
69:     return 'normal'
70:   else if row['TimePeriod'] >= 0.1500765085220337 and row['TimeInterval'] >= 0.00024843215942381327 and row['N_CAN_ID_130'] >= 0.5 then:
71:     return 'normal'
72:   else if row['TimePeriod'] >= 0.1500765085220337 then:
73:     return 'normal'
74:   else
75:     return 'attack'
76: else if row['Arbitration_ID'] == '5B0' then:
77:   if row['TimePeriod'] >= 0.9993560314178467 then:
78:     return 'normal'
79:   else if row['TimePeriod'] >= 0.7984199523925781 then:
80:     return 'normal'
81:   else

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82:     return 'attack'
83: else if row['Arbitration_ID'] == '5BE' then:
84:     if row['TimePeriod'] >= 0.5992350578308105 then:
85:         return 'normal'
86:     else
87:         return 'attack'
88: else if row['Arbitration_ID'] == '5CD' then:
89:     if row['P_CAN_ID_5B0'] >= 0.5 then:
90:         return 'normal'
91:     else if row['TimeInterval'] >= 0.00024652481079100706 and row['P_CAN_ID_52A'] >= 0.5 then:
92:         return 'normal'
93:     else if row['D7'] < 0.5 and row['P_CAN_ID_53F'] >= 0.5 then:
94:         return 'normal'
95:     else if row['P_CAN_ID_5A6'] >= 0.5 then:
96:         return 'normal'
97:     else if row['D3'] < 0.5 and row['P_CAN_ID_47F'] >= 0.5 then:
98:         return 'normal'
99:     else if row['D3'] < 0.5 and row['TimeInterval'] >= 0.00024652481079100706 and row['N_CAN_ID_329'] >= 0.5 then:
100:         return 'normal'
101:     else
102:         return 'attack'
103: else if row['Arbitration_ID'] == '38D' then:
104:     if row['D6'] >= 253.5 and row['D4'] >= 127.5 then:
105:         return 'normal'
106:     else
107:         return 'attack'
108: else if row['Arbitration_ID'] == '42D' then:
109:     if row['D7'] >= 249.5 and row['D1'] < 0.5 then:
110:         return 'normal'
111:     else
112:         return 'attack'
113: else if row['Arbitration_ID'] == '043' then:
114:     if row['TimePeriod'] >= 0.7994328737258911 and row['D4'] >= 31.5 then:
115:         return 'normal'
116:     else
117:         return 'attack'
118: else if row['Arbitration_ID'] == '44E' then:
119:     if row['N_CAN_ID_485'] >= 0.5 then:
120:         return 'normal'
121:     else if row['P_CAN_ID_368'] >= 0.5 and row['N_CAN_ID_520'] >= 0.5 then:
122:         return 'normal'
123:     else if row['TimePeriod'] >= 0.150130033493042 and row['P_CAN_ID_368'] >= 0.5 then:
124:         return 'normal'
125:     else if row['TimePeriod'] >= 0.150130033493042 and row['P_CAN_ID_389'] >= 0.5 then:
126:         return 'normal'
127:     else if row['TimePeriod'] >= 0.150130033493042 and row['P_CAN_ID_140'] >= 0.5 then:
128:         return 'normal'
129:     else
130:         return 'attack'
131: else if row['Arbitration_ID'] == '47F' then:
132:     if row['D2'] >= 254.5 and row['N_CAN_ID_153'] >= 0.5 then:
133:         return 'normal'
134:     else if row['D2'] >= 254.5 and row['P_CAN_ID_260'] >= 0.5 then:
135:         return 'normal'
136:     else if row['D2'] >= 254.5 and row['P_CAN_ID_220'] >= 0.5 then:
137:         return 'normal'
138:     else if row['D2'] >= 254.5 and row['N_CAN_ID_329'] >= 0.5 then:
139:         return 'normal'
140:     else if row['D2'] >= 254.5 and row['D3'] >= 249.5 and row['D7'] >= 64.5 then:
141:         return 'normal'
142:     else if row['D2'] >= 254.5 and row['P_CAN_ID_4F1'] >= 0.5 then:
143:         return 'normal'
144:     else if row['D2'] >= 254.5 and row['D3'] < 250.5 then:
145:         return 'normal'
146:     else
147:         return 'attack'
148: else if row['Arbitration_ID'] == '48A' then:
149:     if row['TimePeriod'] >= 0.048450231552123975 and row['N_CAN_ID_4C9'] >= 0.5 then:
150:         return 'normal'
151:     else if row['D6'] >= 31.5 and row['P_CAN_ID_5BE'] >= 0.5 then:
152:         return 'normal'
153:     else if row['D7'] >= 83.5 and row['N_CAN_ID_50E'] >= 0.5 then:
154:         return 'normal'
155:     else if row['N_CAN_ID_58B'] >= 0.5 and row['P_CAN_ID_368'] >= 0.5 then:
156:         return 'normal'
157:     else if row['N_CAN_ID_58B'] >= 0.5 and row['P_CAN_ID_4C9'] >= 0.5 then:
158:         return 'normal'
159:     else if row['P_CAN_ID_470'] >= 0.5 and row['N_CAN_ID_568'] >= 0.5 then:
160:         return 'normal'
161:     else if row['N_CAN_ID_568'] >= 0.5 and row['P_CAN_ID_453'] >= 0.5 then:
162:         return 'normal'
163:     else if row['TimePeriod'] >= 0.048450231552123975 and row['D6'] >= 31.5 and row['D3'] >= 63.5 then:
164:         return 'normal'
165:     else
166:         return 'attack'

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167: else if row['Arbitration_ID'] == '48C' then:
168:     if row['TimePeriod'] >= 0.19903302192687986 and row['P_CAN_ID_58B'] >= 0.5 then:
169:         return 'normal'
170:     else if row['TimePeriod'] >= 0.19903302192687986 and row['P_CAN_ID_389'] >= 0.5 then:
171:         return 'normal'
172:     else if row['D0'] >= 75.0 and row['D0'] < 78.0 then:
173:         return 'normal'
174:     else
175:         return 'attack'
176: else if row['Arbitration_ID'] == '50A' then:
177:     if row['TimePeriod'] >= 0.14995110034942627 and row['N_CAN_ID_389'] >= 0.5 then:
178:         return 'normal'
179:     else if row['TimePeriod'] >= 0.14995110034942627 and row['P_CAN_ID_421'] >= 0.5 then:
180:         return 'normal'
181:     else if row['D0'] >= 9.5 and row['D0'] < 11.0 then:
182:         return 'normal'
183:     else
184:         return 'attack'
185: else if row['Arbitration_ID'] == '50C' then:
186:     if row['TimePeriod'] >= 0.08359086513519284 and row['N_CAN_ID_52A'] >= 0.5 then:
187:         return 'normal'
188:     else if row['P_CAN_ID_4F1'] >= 0.5 and row['N_CAN_ID_381'] >= 0.5 then:
189:         return 'normal'
190:     else if row['D1'] >= 12.5 and row['D1'] < 16.0 then:
191:         return 'normal'
192:     else if row['TimePeriod'] >= 0.09904611110687252 and row['P_CAN_ID_4F1'] >= 0.5 and row['D5'] >= 14.5 then:
193:         return 'normal'
194:     else if row['TimePeriod'] >= 0.09904611110687252 and row['D0'] >= 60.0 and row['D7'] >= 65.5 then:
195:         return 'normal'
196:     else if row['TimePeriod'] >= 0.09904611110687252 and row['D0'] >= 60.0 and row['D0'] < 69.0 then:
197:         return 'normal'
198:     else if row['D3'] < 9.0 and row['D3'] >= 7.5 then:
199:         return 'normal'
200:     else
201:         return 'attack'
202: else if row['Arbitration_ID'] == '50E' then:
203:     if row['N_CAN_ID_563'] >= 0.5 then:
204:         return 'normal'
205:     else if row['D4'] >= 9.5 and row['D4'] < 10.5 then:
206:         return 'normal'
207:     else
208:         return 'attack'
209: else if row['Arbitration_ID'] == '52A' then:
210:     if row['N_CAN_ID_5B0'] >= 0.5 then:
211:         return 'normal'
212:     else if row['TimePeriod'] >= 0.14979958534240723 and row['D7'] >= 163.0 then:
213:         return 'normal'
214:     else if row['TimePeriod'] >= 0.199363112449646 and row['P_CAN_ID_50C'] >= 0.5 then:
215:         return 'normal'
216:     else if row['TimePeriod'] >= 0.199363112449646 and row['D3'] < 0.5 and row['D4'] >= 1.5 then:
217:         return 'normal'
218:     else if row['D0'] < 0.5 and row['N_CAN_ID_53B'] >= 0.5 then:
219:         return 'normal'
220:     else if row['D4'] >= 1.5 and row['N_CAN_ID_5CD'] >= 0.5 then:
221:         return 'normal'
222:     else if row['D4'] >= 1.5 and row['N_CAN_ID_53F'] >= 0.5 then:
223:         return 'normal'
224:     else if row['D3'] < 0.5 and row['D4'] >= 1.5 and row['D4'] < 4.0 then:
225:         return 'normal'
226:     else
227:         return 'attack'
228: else if row['Arbitration_ID'] == '53B' then:
229:     if row['N_CAN_ID_5A6'] >= 0.5 and row['TimePeriod'] >= 0.19876587390899658 then:
230:         return 'normal'
231:     else if row['P_CAN_ID_4CB'] >= 0.5 then:
232:         return 'normal'
233:     else if row['P_CAN_ID_4CB'] >= 0.5 and row['TimeInterval'] >= 0.00024652481079100706 then:
234:         return 'normal'
235:     else if row['TimeInterval'] >= 0.00024652481079100706 and row['P_CAN_ID_52A'] >= 0.5 and row['N_CAN_ID_251'] < 0.5 then:
236:         return 'normal'
237:     else
238:         return 'attack'
239: else if row['Arbitration_ID'] == '53E' then:
240:     if row['D5'] >= 132.0 and row['P_CAN_ID_470'] >= 0.5 then:
241:         return 'normal'
242:     else if row['D5'] >= 132.0 and row['N_CAN_ID_559'] >= 0.5 then:
243:         return 'normal'
244:     else if row['P_CAN_ID_42D'] >= 0.5 and row['N_CAN_ID_381'] >= 0.5 then:
245:         return 'normal'
246:     else if row['P_CAN_ID_42D'] >= 0.5 and row['N_CAN_ID_220'] >= 0.5 then:
247:         return 'normal'
248:     else if row['P_CAN_ID_42D'] >= 0.5 and row['N_CAN_ID_130'] >= 0.5 then:
249:         return 'normal'
250:     else if row['P_CAN_ID_42D'] >= 0.5 and row['N_CAN_ID_164'] >= 0.5 then:
251:         return 'normal'

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252:     else if row['TimePeriod'] >= 0.08455491065979001 and row['D5'] >= 132.0 and row['P_CAN_ID_42D'] >= 0.5 then:
253:         return 'normal'
254:     else if row['TimePeriod'] >= 0.08455491065979001 and row['D5'] >= 132.0 and row['N_CAN_ID_381'] >= 0.5 then:
255:         return 'normal'
256:     else if row['TimePeriod'] >= 0.08455491065979001 and row['D5'] >= 132.0 and row['D5'] < 135.5 then:
257:         return 'normal'
258:     else if row['P_CAN_ID_4A7'] >= 0.5 then:
259:         return 'normal'
260:     else if row['D1'] < 0.5 and row['N_CAN_ID_559'] >= 0.5 then:
261:         return 'normal'
262:     else if row['TimePeriod'] >= 0.08455491065979001 and row['D3'] < 0.5 and row['D4'] >= 7.0 then:
263:         return 'normal'
264:     else
265:         return 'attack'
266:     else if row['Arbitration_ID'] == '53F' then:
267:         if row['TimeInterval'] >= 0.00024843215942381327 and row['P_CAN_ID_52A'] >= 0.5 and row['N_CAN_ID_251'] < 0.5 then:
268:             return 'normal'
269:         else if row['D1'] < 0.5 and row['P_CAN_ID_52A'] >= 0.5 and row['N_CAN_ID_5CD'] >= 0.5 then:
270:             return 'normal'
271:         else if row['TimePeriod'] >= 0.1993465423583984 and row['P_CAN_ID_4A9'] >= 0.5 then:
272:             return 'normal'
273:         else if row['TimePeriod'] >= 0.1993465423583984 and row['TimeInterval'] >= 0.00024843215942381327 and row['P_CAN_ID_485'] >= 0.5 then:
274:             return 'normal'
275:         else if row['TimePeriod'] >= 0.1993465423583984 and row['TimeInterval'] >= 0.00024843215942381327 and row['P_CAN_ID_140'] >= 0.5 then:
276:             return 'normal'
277:         else if row['N_CAN_ID_5B0'] >= 0.5 then:
278:             return 'normal'
279:         else if row['TimePeriod'] >= 0.1996375322341919 and row['D0'] < 0.5 and row['N_CAN_ID_391'] >= 0.5 then:
280:             return 'normal'
281:         else if row['TimeInterval'] >= 0.00024843215942381327 and row['P_CAN_ID_52A'] >= 0.5 and row['N_CAN_ID_251'] < 0.5 then:
282:             return 'normal'
283:         else if row['D1'] < 0.5 and row['P_CAN_ID_52A'] >= 0.5 and row['N_CAN_ID_5CD'] >= 0.5 then:
284:             return 'normal'
285:         else if row['TimePeriod'] >= 0.1996375322341919 and row['TimeInterval'] >= 0.00024843215942381327 then:
286:             return 'normal'
287:         else
288:             return 'attack'
289:     else if row['Arbitration_ID'] == '57F' then:
290:         if row['TimePeriod'] >= 1.4997565746307373 then:
291:             return 'normal'
292:         else
293:             return 'attack'
294:     else if row['Arbitration_ID'] == '58B' then:
295:         if row['P_CAN_ID_57F'] >= 0.5 then:
296:             return 'normal'
297:         else if row['TimePeriod'] >= 0.034408450126647915 and row['P_CAN_ID_568'] >= 0.5 then:
298:             return 'normal'
299:         else if row['TimePeriod'] >= 0.034408450126647915 and row['N_CAN_ID_48C'] >= 0.5 then:
300:             return 'normal'
301:         else if row['D7'] < 0.5 and row['P_CAN_ID_50E'] >= 0.5 then:
302:             return 'normal'
303:         else if row['P_CAN_ID_48A'] >= 0.5 and row['N_CAN_ID_260'] >= 0.5 then:
304:             return 'normal'
305:         else if row['P_CAN_ID_48A'] >= 0.5 and row['N_CAN_ID_47F'] >= 0.5 then:
306:             return 'normal'
307:         else if row['TimePeriod'] >= 0.034408450126647915 and row['D0'] >= 16.5 and row['D0'] < 17.5 then:
308:             return 'normal'
309:         else if row['TimePeriod'] >= 0.04727303981781002 and row['N_CAN_ID_593'] >= 0.5 then:
310:             return 'normal'
311:         else if row['D7'] < 0.5 and row['P_CAN_ID_50E'] >= 0.5 then:
312:             return 'normal'
313:         else if row['P_CAN_ID_48A'] >= 0.5 and row['N_CAN_ID_260'] >= 0.5 then:
314:             return 'normal'
315:         else if row['P_CAN_ID_48A'] >= 0.5 and row['N_CAN_ID_47F'] >= 0.5 then:
316:             return 'normal'
317:         else if row['P_CAN_ID_48A'] >= 0.5 then:
318:             return 'normal'
319:         else if row['P_CAN_ID_48C'] >= 0.5 then:
320:             return 'normal'
321:         else if row['P_CAN_ID_4C9'] >= 0.5 then:
322:             return 'normal'
323:         else if row['TimePeriod'] >= 0.04727303981781002 and row['N_CAN_ID_260'] >= 0.5 then:
324:             return 'normal'
325:         else if row['TimePeriod'] >= 0.04727303981781002 and row['N_CAN_ID_130'] >= 0.5 then:
326:             return 'normal'
327:         else if row['TimePeriod'] >= 0.04727303981781002 and row['N_CAN_ID_47F'] >= 0.5 then:
328:             return 'normal'
329:         else if row['TimePeriod'] >= 0.04727303981781002 and row['N_CAN_ID_220'] >= 0.5 then:
330:             return 'normal'
331:         else if row['TimePeriod'] >= 0.04727303981781002 and row['N_CAN_ID_38D'] >= 0.5 then:
332:             return 'normal'
333:         else if row['TimePeriod'] >= 0.04727303981781002 and row['D3'] < 0.5 and row['P_CAN_ID_389'] >= 0.5 then:
334:             return 'normal'
335:         else if row['TimePeriod'] >= 0.04727303981781002 and row['D3'] < 0.5 and row['N_CAN_ID_391'] >= 0.5 then:
336:             return 'normal'

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337:     else if row['TimePeriod'] >= 0.04727303981781002 and row['D3'] < 0.5 and row['P_CAN_ID_140'] >= 0.5 then:
338:         return 'normal'
339:     else
340:         return 'attack'
341:     else if row['Arbitration_ID'] == 130 then:
342:         if row['N_CAN_ID_140'] >= 0.5 then:
343:             return 'normal'
344:         else
345:             return 'attack'
346:     else if row['Arbitration_ID'] == 140 then:
347:         if row['P_CAN_ID_130'] >= 0.5 then:
348:             return 'normal'
349:         else
350:             return 'attack'
351:     else if row['Arbitration_ID'] == 572 then:
352:         if row['TimePeriod'] >= 0.19915390014648435 and row['P_CAN_ID_49F'] >= 0.5 then:
353:             return 'normal'
354:         else if row['TimePeriod'] >= 0.19915390014648435 and row['P_CAN_ID_520'] >= 0.5 and row['N_CAN_ID_47F'] >= 0.5 then:
355:             return 'normal'
356:         else if row['TimePeriod'] >= 0.19915390014648435 and row['P_CAN_ID_520'] >= 0.5 and row['N_CAN_ID_260'] >= 0.5 then:
357:             return 'normal'
358:         else if row['TimePeriod'] >= 0.19915390014648435 and row['P_CAN_ID_520'] >= 0.5 then:
359:             return 'normal'
360:         else if row['TimePeriod'] >= 0.19915390014648435 and row['D0'] < 0.5 and row['N_CAN_ID_47F'] >= 0.5 then:
361:             return 'normal'
362:         else if row['P_CAN_ID_49F'] >= 0.5 and row['N_CAN_ID_47F'] >= 0.5 then:
363:             return 'normal'
364:         else if row['P_CAN_ID_49F'] >= 0.5 and row['N_CAN_ID_260'] >= 0.5 then:
365:             return 'normal'
366:         else if row['P_CAN_ID_49F'] >= 0.5 and row['N_CAN_ID_130'] >= 0.5 then:
367:             return 'normal'
368:         else if row['TimeInterval'] >= 0.00024902820587155005 and row['N_CAN_ID_47F'] >= 0.5 then:
369:             return 'normal'
370:         else if row['TimeInterval'] >= 0.00024902820587155005 and row['D7'] < 0.5 and row['N_CAN_ID_391'] >= 0.5 then:
371:             return 'normal'
372:         else if row['D3'] < 0.5 and row['N_CAN_ID_47F'] >= 0.5 then:
373:             return 'normal'
374:         else if row['D3'] < 0.5 and row['D7'] < 0.5 and row['N_CAN_ID_260'] >= 0.5 then:
375:             return 'normal'
376:         else
377:             return 'attack'
378:     else if row['Arbitration_ID'] == 153 then:
379:         if row['D5'] >= 254.5 and row['P_CAN_ID_220'] >= 0.5 then:
380:             return 'normal'
381:         else if row['D5'] >= 254.5 and row['D2'] < 16.5 then:
382:             return 'normal'
383:         else if row['D3'] >= 254.5 and row['D1'] >= 127.5 then:
384:             return 'normal'
385:         else
386:             return 'attack'
387:     else if row['Arbitration_ID'] == 164 then:
388:         if row['DLC'] < 4.5 and row['P_CAN_ID_2B0'] >= 0.5 then:
389:             return 'normal'
390:         else if row['DLC'] < 4.5 and row['N_CAN_ID_340'] >= 0.5 then:
391:             return 'normal'
392:         else if row['DLC'] < 4.5 and row['P_CAN_ID_421'] >= 0.5 then:
393:             return 'normal'
394:         else if row['DLC'] < 4.5 and row['P_CAN_ID_593'] >= 0.5 then:
395:             return 'normal'
396:         else if row['N_CAN_ID_386'] >= 0.5 and row['P_CAN_ID_490'] >= 0.5 then:
397:             return 'normal'
398:         else if row['N_CAN_ID_386'] >= 0.5 and row['P_CAN_ID_140'] >= 0.5 then:
399:             return 'normal'
400:         else if row['N_CAN_ID_386'] >= 0.5 and row['P_CAN_ID_492'] >= 0.5 then:
401:             return 'normal'
402:         else if row['N_CAN_ID_386'] >= 0.5 and row['P_CAN_ID_484'] >= 0.5 then:
403:             return 'normal'
404:         else if row['P_CAN_ID_490'] >= 0.5 and row['N_CAN_ID_394'] >= 0.5 then:
405:             return 'normal'
406:         else if row['DLC'] < 4.5 and row['D0'] < 0.5 and row['D1'] >= 7.5 then:
407:             return 'normal'
408:         else
409:             return 'attack'
410:     else if row['Arbitration_ID'] == 568 then:
411:         if row['N_CAN_ID_57F'] >= 0.5 then:
412:             return 'normal'
413:         else if row['TimePeriod'] >= 0.0841734409332275 and row['P_CAN_ID_563'] >= 0.5 then:
414:             return 'normal'
415:         else if row['TimePeriod'] >= 0.0841734409332275 and row['D3'] >= 140.5 and row['N_CAN_ID_58B'] >= 0.5 then:
416:             return 'normal'
417:         else if row['TimePeriod'] >= 0.0841734409332275 and row['D3'] >= 140.5 and row['D2'] < 0.5 then:
418:             return 'normal'
419:         else if row['TimePeriod'] >= 0.09802758693695066 and row['P_CAN_ID_563'] >= 0.5 then:
420:             return 'normal'
421:         else if row['TimePeriod'] >= 0.09802758693695066 and row['D4'] >= 127.5 and row['N_CAN_ID_58B'] >= 0.5 then:

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422:     return 'normal'
423: else if row['TimePeriod'] >= 0.09802758693695066 and row['D4'] >= 127.5 and row['D5'] < 0.5 then:
424:     return 'normal'
425: else if row['D4'] >= 127.5 and row['N_CAN_ID_58B'] >= 0.5 then:
426:     return 'normal'
427: else
428:     return 'attack'
429: else if row['Arbitration_ID'] == 220 then:
430:     if row['D5'] >= 230.5 and row['P_CAN_ID_153'] >= 0.5 then:
431:         return 'normal'
432:     else if row['D5'] >= 230.5 and row['N_CAN_ID_153'] >= 0.5 then:
433:         return 'normal'
434:     else if row['D2'] >= 124.5 and row['D5'] >= 230.5 and row['D3'] < 0.5 then:
435:         return 'normal'
436:     else if row['D2'] >= 124.5 and row['D3'] < 0.5 and row['D6'] >= 14.5 then:
437:         return 'normal'
438:     else
439:         return 'attack'
440: else if row['Arbitration_ID'] == 563 then:
441:     if row['TimePeriod'] >= 0.5493254661560059 and row['P_CAN_ID_50E'] >= 0.5 then:
442:         return 'normal'
443:     else if row['TimePeriod'] >= 0.5493254661560059 and row['P_CAN_ID_340'] >= 0.5 then:
444:         return 'normal'
445:     else if row['N_CAN_ID_568'] >= 0.5 and row['D0'] >= 190.0 and row['D3'] < 0.5 then:
446:         return 'normal'
447:     else
448:         return 'attack'
449: else if row['Arbitration_ID'] == 260 then:
450:     if row['D4'] >= 254.5 and row['D6'] >= 84.5 then:
451:         return 'normal'
452:     else if row['D4'] >= 254.5 and row['D6'] >= 80.5 then:
453:         return 'normal'
454:     else if row['D5'] >= 185.5 and row['P_CAN_ID_479'] >= 0.5 then:
455:         return 'normal'
456:     else if row['N_CAN_ID_38D'] >= 0.5 and row['P_CAN_ID_541'] >= 0.5 then:
457:         return 'normal'
458:     else if row['D5'] >= 185.5 and row['D1'] >= 21.0 and row['D0'] < 5.5 then:
459:         return 'normal'
460:     else
461:         return 'attack'
462: else if row['Arbitration_ID'] == 559 then:
463:     if row['TimePeriod'] >= 0.1502856016159057 and row['P_CAN_ID_53E'] >= 0.5 then:
464:         return 'normal'
465:     else if row['P_CAN_ID_453'] >= 0.5 and row['N_CAN_ID_260'] >= 0.5 then:
466:         return 'normal'
467:     else if row['P_CAN_ID_453'] >= 0.5 and row['N_CAN_ID_340'] >= 0.5 then:
468:         return 'normal'
469:     else if row['TimePeriod'] >= 0.1502856016159057 and row['TimeInterval'] >= 0.00024950504302975003 and row['P_CAN_ID_453'] >= 0.5 then:
470:         return 'normal'
471:     else if row['TimePeriod'] >= 0.1502856016159057 and row['P_CAN_ID_4F1'] >= 0.5 then:
472:         return 'normal'
473:     else if row['TimePeriod'] >= 0.1502856016159057 and row['P_CAN_ID_500'] >= 0.5 then:
474:         return 'normal'
475:     else if row['TimePeriod'] >= 0.1502856016159057 and row['P_CAN_ID_470'] >= 0.5 then:
476:         return 'normal'
477:     else if row['TimePeriod'] >= 0.1502856016159057 and row['N_CAN_ID_500'] >= 0.5 then:
478:         return 'normal'
479:     else if row['TimePeriod'] >= 0.1502856016159057 and row['P_CAN_ID_4F1'] >= 0.5 then:
480:         return 'normal'
481:     else if row['TimePeriod'] >= 0.1502856016159057 and row['P_CAN_ID_500'] >= 0.5 then:
482:         return 'normal'
483:     else if row['TimePeriod'] >= 0.1502856016159057 and row['P_CAN_ID_470'] >= 0.5 then:
484:         return 'normal'
485:     else if row['TimePeriod'] >= 0.1502856016159057 and row['N_CAN_ID_500'] >= 0.5 then:
486:         return 'normal'
487:     else if row['P_CAN_ID_453'] >= 0.5 and row['N_CAN_ID_260'] >= 0.5 then:
488:         return 'normal'
489:     else if row['P_CAN_ID_453'] >= 0.5 and row['N_CAN_ID_340'] >= 0.5 then:
490:         return 'normal'
491:     else if row['TimePeriod'] >= 0.19930958747863764 and row['P_CAN_ID_453'] >= 0.5 and row['N_CAN_ID_130'] >= 0.5 then:
492:         return 'normal'
493:     else if row['TimePeriod'] >= 0.19930958747863764 and row['P_CAN_ID_453'] >= 0.5 then:
494:         return 'normal'
495:     else if row['TimePeriod'] >= 0.19930958747863764 and row['N_CAN_ID_220'] >= 0.5 then:
496:         return 'normal'
497:     else if row['TimePeriod'] >= 0.19930958747863764 and row['P_CAN_ID_4F1'] >= 0.5 then:
498:         return 'normal'
499:     else if row['TimePeriod'] >= 0.19930958747863764 and row['P_CAN_ID_500'] >= 0.5 then:
500:         return 'normal'
501:     else if row['TimePeriod'] >= 0.19930958747863764 and row['P_CAN_ID_470'] >= 0.5 then:
502:         return 'normal'
503:     else if row['TimePeriod'] >= 0.19930958747863764 and row['N_CAN_ID_500'] >= 0.5 then:
504:         return 'normal'
505:     else if row['TimePeriod'] >= 0.19930958747863764 and row['TimeInterval'] >= 0.00024807453155515 and row['N_CAN_ID_130'] >= 0.5 then:
506:         return 'normal'

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507:     else
508:         return 'attack'
509: else if row['Arbitration_ID'] == 553 then:
510:     if row['TimePeriod'] >= 0.1982516050338745 and row['P_CAN_ID_544'] >= 0.5 then:
511:         return 'normal'
512:     else if row['TimePeriod'] >= 0.1982516050338745 and row['D6'] >= 127.5 then:
513:         return 'normal'
514:     else
515:         return 'attack'
516: else if row['Arbitration_ID'] == 544 then:
517:     if row['D0'] >= 254.5 then:
518:         return 'normal'
519:     else
520:         return 'attack'
521: else if row['Arbitration_ID'] == 381 then:
522:     if row['D1'] >= 143.5 and row['N_CAN_ID_251'] >= 0.5 and row['D6'] >= 16.5 then:
523:         return 'normal'
524:     else if row['D1'] >= 143.5 and row['N_CAN_ID_251'] >= 0.5 and row['D5'] >= 40.5 then:
525:         return 'normal'
526:     else if row['D1'] >= 143.5 and row['D0'] >= 127.5 and row['D3'] < 0.5 then:
527:         return 'normal'
528:     else if row['N_CAN_ID_251'] >= 0.5 and row['D0'] >= 127.5 and row['D3'] < 0.5 then:
529:         return 'normal'
530:     else
531:         return 'attack'
532: else if row['Arbitration_ID'] == 541 then:
533:     if row['P_CAN_ID_470'] >= 0.5 and row['N_CAN_ID_340'] >= 0.5 then:
534:         return 'normal'
535:     else if row['D0'] < 3.5 and row['D0'] >= 2.5 then:
536:         return 'normal'
537:     else
538:         return 'attack'
539: else if row['Arbitration_ID'] == 520 then:
540:     if row['TimeInterval'] >= 0.00025045871734615 and row['P_CAN_ID_44E'] >= 0.5 then:
541:         return 'normal'
542:     else if row['TimeInterval'] >= 0.00025045871734615 and row['N_CAN_ID_572'] >= 0.5 then:
543:         return 'normal'
544:     else if row['N_CAN_ID_47F'] >= 0.5 and row['P_CAN_ID_490'] >= 0.5 then:
545:         return 'normal'
546:     else if row['TimeInterval'] >= 0.00025045871734615 and row['D7'] < 0.5 and row['P_CAN_ID_4F1'] >= 0.5 then:
547:         return 'normal'
548:     else if row['TimeInterval'] >= 0.00025045871734615 and row['P_CAN_ID_368'] >= 0.5 and row['N_CAN_ID_260'] >= 0.5 then:
549:         return 'normal'
550:     else if row['TimeInterval'] >= 0.00025045871734615 and row['P_CAN_ID_368'] >= 0.5 and row['N_CAN_ID_130'] >= 0.5 then:
551:         return 'normal'
552:     else if row['P_CAN_ID_49F'] >= 0.5 then:
553:         return 'normal'
554:     else if row['TimeInterval'] >= 0.00025045871734615 and row['P_CAN_ID_490'] >= 0.5 then:
555:         return 'normal'
556:     else if row['N_CAN_ID_260'] >= 0.5 and row['P_CAN_ID_500'] >= 0.5 then:
557:         return 'normal'
558:     else if row['TimeInterval'] >= 0.00025045871734615 and row['D3'] < 0.5 and row['P_CAN_ID_368'] >= 0.5 then:
559:         return 'normal'
560:     else if row['TimeInterval'] >= 0.00025045871734615 and row['D3'] < 0.5 and row['N_CAN_ID_391'] >= 0.5 then:
561:         return 'normal'
562:     else if row['TimeInterval'] >= 0.00025045871734615 and row['D7'] < 0.5 and row['P_CAN_ID_485'] >= 0.5 then:
563:         return 'normal'
564:     else if row['N_CAN_ID_07F'] >= 0.5 then:
565:         return 'normal'
566:     else if row['TimeInterval'] >= 0.00024998188018795 and row['P_CAN_ID_44E'] >= 0.5 then:
567:         return 'normal'
568:     else if row['TimeInterval'] >= 0.00024998188018795 and row['N_CAN_ID_572'] >= 0.5 then:
569:         return 'normal'
570:     else if row['N_CAN_ID_47F'] >= 0.5 and row['P_CAN_ID_490'] >= 0.5 then:
571:         return 'normal'
572:     else if row['TimeInterval'] >= 0.00024998188018795 and row['D7'] < 0.5 and row['P_CAN_ID_4F1'] >= 0.5 then:
573:         return 'normal'
574:     else if row['TimeInterval'] >= 0.00024998188018795 and row['P_CAN_ID_368'] >= 0.5 and row['N_CAN_ID_260'] >= 0.5 then:
575:         return 'normal'
576:     else if row['TimeInterval'] >= 0.00024998188018795 and row['P_CAN_ID_368'] >= 0.5 and row['N_CAN_ID_130'] >= 0.5 then:
577:         return 'normal'
578:     else if row['TimeInterval'] >= 0.00024998188018795 and row['P_CAN_ID_490'] >= 0.5 then:
579:         return 'normal'
580:     else if row['N_CAN_ID_260'] >= 0.5 and row['P_CAN_ID_500'] >= 0.5 then:
581:         return 'normal'
582:     else if row['TimeInterval'] >= 0.00024998188018795 and row['D3'] < 0.5 and row['P_CAN_ID_368'] >= 0.5 then:
583:         return 'normal'
584:     else if row['TimeInterval'] >= 0.00024998188018795 and row['D3'] < 0.5 and row['N_CAN_ID_391'] >= 0.5 then:
585:         return 'normal'
586:     else if row['TimeInterval'] >= 0.00024998188018795 and row['D7'] < 0.5 and row['P_CAN_ID_485'] >= 0.5 then:
587:         return 'normal'
588:     else
589:         return 'attack'
590: else if row['Arbitration_ID'] == 386 then:
591:     if row['P_CAN_ID_164'] >= 0.5 and row['N_CAN_ID_38D'] >= 0.5 then:

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592:     return 'normal'
593: else if row['P_CAN_ID_164'] >= 0.5 and row['N_CAN_ID_593'] >= 0.5 then:
594:     return 'normal'
595: else if row['N_CAN_ID_356'] >= 0.5 and row['P_CAN_ID_593'] >= 0.5 then:
596:     return 'normal'
597: else if row['D7'] >= 127.5 and row['P_CAN_ID_164'] >= 0.5 and row['N_CAN_ID_366'] >= 0.5 then:
598:     return 'normal'
599: else if row['D7'] >= 127.5 and row['P_CAN_ID_164'] >= 0.5 and row['N_CAN_ID_420'] >= 0.5 then:
600:     return 'normal'
601: else if row['D7'] >= 127.5 and row['D6'] < 0.5 and row['N_CAN_ID_420'] >= 0.5 then:
602:     return 'normal'
603: else if row['D7'] >= 127.5 and row['D6'] < 0.5 and row['N_CAN_ID_421'] >= 0.5 then:
604:     return 'normal'
605: else if row['D7'] >= 127.5 and row['D6'] < 0.5 and row['P_CAN_ID_38D'] >= 0.5 then:
606:     return 'normal'
607: else if row['D7'] >= 127.5 and row['D6'] < 0.5 and row['P_CAN_ID_490'] >= 0.5 then:
608:     return 'normal'
609: else if row['D7'] >= 127.5 and row['D0'] < 0.5 and row['N_CAN_ID_389'] >= 0.5 then:
610:     return 'normal'
611: else if row['D7'] >= 127.5 and row['N_CAN_ID_366'] >= 0.5 and row['P_CAN_ID_340'] >= 0.5 then:
612:     return 'normal'
613: else if row['D6'] < 0.5 and row['D5'] >= 63.5 and row['N_CAN_ID_366'] >= 0.5 then:
614:     return 'normal'
615: else if row['D5'] >= 63.5 and row['D0'] < 0.5 and row['P_CAN_ID_420'] >= 0.5 then:
616:     return 'normal'
617: else if row['P_CAN_ID_164'] >= 0.5 then:
618:     return 'normal'
619: else if row['D7'] >= 127.5 and row['D6'] < 0.5 and row['N_CAN_ID_356'] >= 0.5 then:
620:     return 'normal'
621: else if row['D7'] >= 127.5 and row['P_CAN_ID_340'] >= 0.5 and row['N_CAN_ID_130'] >= 0.5 then:
622:     return 'normal'
623: else if row['D1'] >= 63.0 and row['D2'] < 0.5 and row['D4'] < 0.5 then:
624:     return 'normal'
625: else
626:     return 'attack'
627: else if row['Arbitration_ID'] == 507 then:
628:     if row['TimeInterval'] < 0.00017893314361565001 and row['P_CAN_ID_153'] >= 0.5 then:
629:         return 'normal'
630:     else if row['TimeInterval'] < 0.00017893314361565001 and row['P_CAN_ID_220'] >= 0.5 then:
631:         return 'normal'
632:     else if row['TimeInterval'] < 0.00017893314361565001 and row['D3'] < 1.5 and row['P_CAN_ID_260'] >= 0.5 then:
633:         return 'normal'
634:     else if row['TimeInterval'] < 0.00017893314361565001 and row['D3'] < 1.5 and row['P_CAN_ID_485'] >= 0.5 then:
635:         return 'normal'
636:     else if row['TimeInterval'] < 0.00017893314361565001 and row['D3'] < 1.5 and row['P_CAN_ID_500'] >= 0.5 then:
637:         return 'normal'
638:     else if row['TimeInterval'] < 0.00017893314361565001 and row['D3'] < 1.5 and row['P_CAN_ID_4F1'] >= 0.5 then:
639:         return 'normal'
640:     else if row['TimeInterval'] < 0.00017893314361565001 and row['D3'] < 1.5 and row['N_CAN_ID_391'] >= 0.5 then:
641:         return 'normal'
642:     else if row['TimeInterval'] < 0.00017893314361565001 and row['D0'] < 0.5 and row['N_CAN_ID_329'] >= 0.5 then:
643:         return 'normal'
644:     else if row['TimeInterval'] < 0.00017893314361565001 and row['D2'] < 0.5 and row['N_CAN_ID_500'] >= 0.5 then:
645:         return 'normal'
646:     else if row['DLC'] < 4.5 and row['P_CAN_ID_153'] >= 0.5 then:
647:         return 'normal'
648:     else if row['DLC'] < 4.5 and row['P_CAN_ID_220'] >= 0.5 then:
649:         return 'normal'
650:     else if row['DLC'] < 4.5 and row['D1'] < 0.5 and row['P_CAN_ID_500'] >= 0.5 then:
651:         return 'normal'
652:     else if row['DLC'] < 4.5 and row['D1'] < 0.5 and row['P_CAN_ID_4F1'] >= 0.5 then:
653:         return 'normal'
654:     else if row['DLC'] < 4.5 and row['D0'] < 0.5 and row['P_CAN_ID_485'] >= 0.5 then:
655:         return 'normal'
656:     else if row['DLC'] < 4.5 and row['D2'] < 0.5 and row['P_CAN_ID_260'] >= 0.5 then:
657:         return 'normal'
658:     else if row['DLC'] < 4.5 and row['D1'] < 0.5 and row['N_CAN_ID_391'] >= 0.5 then:
659:         return 'normal'
660:     else if row['DLC'] < 4.5 and row['D0'] < 0.5 and row['N_CAN_ID_329'] >= 0.5 then:
661:         return 'normal'
662:     else if row['DLC'] < 4.5 and row['D2'] < 0.5 and row['N_CAN_ID_500'] >= 0.5 then:
663:         return 'normal'
664:     else if row['D4'] < 0.5 and row['P_CAN_ID_153'] >= 0.5 then:
665:         return 'normal'
666:     else if row['D4'] < 0.5 and row['P_CAN_ID_220'] >= 0.5 then:
667:         return 'normal'
668:     else if row['D4'] < 0.5 and row['D0'] < 0.5 and row['P_CAN_ID_485'] >= 0.5 then:
669:         return 'normal'
670:     else if row['D4'] < 0.5 and row['D2'] < 0.5 and row['P_CAN_ID_260'] >= 0.5 then:
671:         return 'normal'
672:     else if row['D4'] < 0.5 and row['D2'] < 0.5 and row['P_CAN_ID_500'] >= 0.5 then:
673:         return 'normal'
674:     else if row['D4'] < 0.5 and row['P_CAN_ID_4F1'] >= 0.5 then:
675:         return 'normal'
676:     else if row['D4'] < 0.5 and row['D0'] < 0.5 and row['N_CAN_ID_329'] >= 0.5 then:

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677:     return 'normal'
678: else if row['D4'] < 0.5 and row['D2'] < 0.5 and row['N_CAN_ID_391'] >= 0.5 then:
679:     return 'normal'
680: else if row['D4'] < 0.5 and row['D2'] < 0.5 and row['N_CAN_ID_500'] >= 0.5 then:
681:     return 'normal'
682: else
683:     return 'attack'
684: else if row['Arbitration_ID'] == 500 then:
685:     if row['D0'] < 1.5 and row['N_CAN_ID_507'] >= 0.5 then:
686:         return 'normal'
687:     else if row['P_CAN_ID_495'] >= 0.5 and row['N_CAN_ID_260'] >= 0.5 then:
688:         return 'normal'
689:     else if row['P_CAN_ID_495'] >= 0.5 and row['N_CAN_ID_47F'] >= 0.5 then:
690:         return 'normal'
691:     else if row['D3'] < 0.5 and row['D5'] < 0.5 and row['P_CAN_ID_495'] >= 0.5 then:
692:         return 'normal'
693:     else if row['D3'] < 0.5 and row['D1'] < 7.5 and row['D1'] >= 6.5 then:
694:         return 'normal'
695:     else
696:         return 'attack'
697: else if row['Arbitration_ID'] == 495 then:
698:     if row['D6'] >= 134.5 and row['N_CAN_ID_500'] >= 0.5 then:
699:         return 'normal'
700:     else if row['D6'] >= 134.5 and row['D2'] >= 96.5 and row['D4'] >= 27.5 then:
701:         return 'normal'
702:     else
703:         return 'attack'
704: else if row['Arbitration_ID'] == 492 then:
705:     if row['D1'] >= 253.5 and row['D5'] < 0.5 then:
706:         return 'normal'
707:     else
708:         return 'attack'
709: else if row['Arbitration_ID'] == 329 then:
710:     if row['D1'] >= 196.5 and row['P_CAN_ID_47F'] >= 0.5 then:
711:         return 'normal'
712:     else if row['D1'] >= 196.5 and row['N_CAN_ID_492'] >= 0.5 then:
713:         return 'normal'
714:     else if row['D1'] >= 196.5 and row['N_CAN_ID_389'] >= 0.5 then:
715:         return 'normal'
716:     else if row['D1'] >= 196.5 and row['P_CAN_ID_421'] >= 0.5 then:
717:         return 'normal'
718:     else if row['D1'] >= 196.5 and row['N_CAN_ID_421'] >= 0.5 then:
719:         return 'normal'
720:     else if row['D1'] >= 196.5 and row['P_CAN_ID_507'] >= 0.5 then:
721:         return 'normal'
722:     else if row['D1'] >= 196.5 and row['N_CAN_ID_484'] >= 0.5 then:
723:         return 'normal'
724:     else if row['D4'] >= 48.0 and row['P_CAN_ID_485'] >= 0.5 then:
725:         return 'normal'
726:     else if row['P_CAN_ID_260'] >= 0.5 and row['N_CAN_ID_381'] >= 0.5 then:
727:         return 'normal'
728:     else if row['P_CAN_ID_260'] >= 0.5 and row['N_CAN_ID_251'] >= 0.5 then:
729:         return 'normal'
730:     else if row['N_CAN_ID_381'] >= 0.5 and row['P_CAN_ID_220'] >= 0.5 then:
731:         return 'normal'
732:     else if row['P_CAN_ID_260'] >= 0.5 and row['N_CAN_ID_381'] >= 0.5 then:
733:         return 'normal'
734:     else if row['P_CAN_ID_260'] >= 0.5 and row['N_CAN_ID_251'] >= 0.5 then:
735:         return 'normal'
736:     else if row['P_CAN_ID_260'] >= 0.5 and row['N_CAN_ID_492'] >= 0.5 then:
737:         return 'normal'
738:     else if row['N_CAN_ID_381'] >= 0.5 and row['P_CAN_ID_220'] >= 0.5 then:
739:         return 'normal'
740:     else if row['N_CAN_ID_381'] >= 0.5 and row['P_CAN_ID_485'] >= 0.5 then:
741:         return 'normal'
742:     else if row['N_CAN_ID_340'] >= 0.5 and row['P_CAN_ID_47F'] >= 0.5 then:
743:         return 'normal'
744:     else if row['P_CAN_ID_220'] >= 0.5 and row['N_CAN_ID_492'] >= 0.5 then:
745:         return 'normal'
746:     else if row['N_CAN_ID_391'] >= 0.5 and row['P_CAN_ID_47F'] >= 0.5 then:
747:         return 'normal'
748:     else if row['D3'] >= 139.5 and row['D6'] < 0.5 and row['P_CAN_ID_507'] >= 0.5 then:
749:         return 'normal'
750:     else if row['D3'] >= 139.5 and row['D0'] >= 69.0 and row['N_CAN_ID_381'] >= 0.5 then:
751:         return 'normal'
752:     else if row['D3'] >= 139.5 and row['D0'] >= 69.0 and row['P_CAN_ID_47F'] >= 0.5 then:
753:         return 'normal'
754:     else if row['D3'] >= 139.5 and row['D0'] >= 69.0 and row['N_CAN_ID_492'] >= 0.5 then:
755:         return 'normal'
756:     else if row['D3'] >= 139.5 and row['D0'] >= 69.0 and row['N_CAN_ID_53E'] >= 0.5 then:
757:         return 'normal'
758:     else if row['D3'] >= 139.5 and row['D5'] >= 37.5 and row['N_CAN_ID_492'] >= 0.5 then:
759:         return 'normal'
760:     else if row['D3'] >= 139.5 and row['D7'] < 16.5 and row['N_CAN_ID_484'] >= 0.5 then:
761:         return 'normal'

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762:   else if row['D3'] >= 139.5 and row['P_CAN_ID_260'] >= 0.5 and row['N_CAN_ID_38D'] >= 0.5 then:
763:       return 'normal'
764:   else if row['D3'] >= 139.5 and row['P_CAN_ID_260'] >= 0.5 and row['N_CAN_ID_391'] >= 0.5 then:
765:       return 'normal'
766:   else if row['D3'] >= 139.5 and row['N_CAN_ID_130'] >= 0.5 and row['P_CAN_ID_485'] >= 0.5 then:
767:       return 'normal'
768:   else if row['D3'] >= 139.5 and row['N_CAN_ID_391'] >= 0.5 and row['P_CAN_ID_140'] >= 0.5 then:
769:       return 'normal'
770:   else if row['D6'] < 0.5 and row['P_CAN_ID_220'] >= 0.5 and row['N_CAN_ID_391'] >= 0.5 then:
771:       return 'normal'
772:   else if row['D0'] >= 69.0 and row['D5'] >= 37.5 and row['N_CAN_ID_38D'] >= 0.5 then:
773:       return 'normal'
774:   else if row['D0'] >= 69.0 and row['D7'] < 16.5 and row['P_CAN_ID_421'] >= 0.5 then:
775:       return 'normal'
776:   else if row['D0'] >= 69.0 and row['N_CAN_ID_340'] >= 0.5 and row['P_CAN_ID_140'] >= 0.5 then:
777:       return 'normal'
778:   else if row['D0'] >= 69.0 and row['N_CAN_ID_340'] >= 0.5 and row['P_CAN_ID_389'] >= 0.5 then:
779:       return 'normal'
780:   else if row['D5'] >= 37.5 and row['N_CAN_ID_340'] >= 0.5 and row['P_CAN_ID_389'] >= 0.5 then:
781:       return 'normal'
782:   else if row['D3'] >= 139.5 and row['N_CAN_ID_381'] >= 0.5 then:
783:       return 'normal'
784:   else if row['D3'] >= 139.5 and row['N_CAN_ID_340'] >= 0.5 then:
785:       return 'normal'
786:   else if row['D3'] >= 139.5 and row['N_CAN_ID_130'] >= 0.5 then:
787:       return 'normal'
788:   else if row['D3'] >= 139.5 and row['N_CAN_ID_391'] >= 0.5 then:
789:       return 'normal'
790:   else if row['D3'] >= 139.5 and row['N_CAN_ID_500'] >= 0.5 then:
791:       return 'normal'
792:   else if row['D6'] < 0.5 and row['N_CAN_ID_421'] >= 0.5 then:
793:       return 'normal'
794:   else if row['D0'] >= 69.0 and row['P_CAN_ID_500'] >= 0.5 then:
795:       return 'normal'
796:   else if row['N_CAN_ID_38D'] >= 0.5 and row['P_CAN_ID_500'] >= 0.5 then:
797:       return 'normal'
798:   else if row['D3'] >= 139.5 and row['D6'] < 0.5 and row['N_CAN_ID_38D'] >= 0.5 then:
799:       return 'normal'
800:   else if row['D3'] >= 139.5 and row['D0'] >= 69.0 and row['P_CAN_ID_220'] >= 0.5 then:
801:       return 'normal'
802:   else if row['D3'] >= 139.5 and row['D0'] >= 69.0 and row['P_CAN_ID_42D'] >= 0.5 then:
803:       return 'normal'
804:   else if row['D3'] >= 139.5 and row['D7'] < 16.5 and row['N_CAN_ID_389'] >= 0.5 then:
805:       return 'normal'
806:   else if row['D3'] >= 139.5 and row['D7'] < 16.5 and row['N_CAN_ID_53E'] >= 0.5 then:
807:       return 'normal'
808:   else if row['D3'] >= 139.5 and row['N_CAN_ID_251'] >= 0.5 and row['P_CAN_ID_140'] >= 0.5 then:
809:       return 'normal'
810:   else if row['D6'] < 0.5 and row['D0'] >= 69.0 and row['P_CAN_ID_484'] >= 0.5 then:
811:       return 'normal'
812:   else
813:       return 'attack'
814:   else if row['Arbitration_ID'] == 490 then:
815:       if row['D6'] >= 59.5 and row['N_CAN_ID_520'] >= 0.5 then:
816:           return 'normal'
817:       else if row['D5'] >= 47.0 and row['N_CAN_ID_49F'] >= 0.5 then:
818:           return 'normal'
819:       else if row['TimePeriod'] >= 0.034796476364135645 and row['D6'] >= 59.5 and row['D5'] >= 47.0 then:
820:           return 'normal'
821:       else if row['TimePeriod'] >= 0.034796476364135645 and row['N_CAN_ID_164'] >= 0.5 then:
822:           return 'normal'
823:       else if row['D6'] >= 59.5 and row['N_CAN_ID_49F'] >= 0.5 then:
824:           return 'normal'
825:       else if row['D6'] >= 59.5 and row['P_CAN_ID_394'] >= 0.5 then:
826:           return 'normal'
827:       else if row['TimePeriod'] >= 0.034796476364135645 and row['D6'] >= 59.5 and row['P_CAN_ID_2B0'] >= 0.5 then:
828:           return 'normal'
829:       else if row['TimePeriod'] >= 0.034796476364135645 and row['D6'] >= 59.5 and row['N_CAN_ID_356'] >= 0.5 then:
830:           return 'normal'
831:       else
832:           return 'attack'
833:   else if row['Arbitration_ID'] == 485 then:
834:       if row['DLC'] < 4.5 and row['P_CAN_ID_44E'] >= 0.5 then:
835:           return 'normal'
836:       else if row['DLC'] < 4.5 and row['N_CAN_ID_4A9'] >= 0.5 then:
837:           return 'normal'
838:       else if row['D3'] < 0.5 and row['N_CAN_ID_507'] >= 0.5 then:
839:           return 'normal'
840:       else if row['DLC'] < 4.5 and row['TimePeriod'] >= 0.047239065170288 and row['N_CAN_ID_490'] >= 0.5 then:
841:           return 'normal'
842:       else if row['DLC'] < 4.5 and row['TimePeriod'] >= 0.047239065170288 and row['N_CAN_ID_381'] >= 0.5 then:
843:           return 'normal'
844:       else if row['DLC'] < 4.5 and row['TimePeriod'] >= 0.047239065170288 and row['N_CAN_ID_220'] >= 0.5 then:
845:           return 'normal'
846:       else if row['DLC'] < 4.5 and row['TimePeriod'] >= 0.047239065170288 and row['N_CAN_ID_47F'] >= 0.5 then:

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847:     return 'normal'
848: else if row['DLC'] < 4.5 and row['D3'] < 0.5 and row['P_CAN_ID_340'] >= 0.5 then:
849:     return 'normal'
850: else if row['DLC'] < 4.5 and row['D3'] < 0.5 and row['P_CAN_ID_389'] >= 0.5 then:
851:     return 'normal'
852: else if row['DLC'] < 4.5 and row['D3'] < 0.5 and row['P_CAN_ID_391'] >= 0.5 then:
853:     return 'normal'
854: else if row['DLC'] < 4.5 and row['D3'] < 0.5 then:
855:     return 'normal'
856: else
857:     return 'attack'
858: else if row['Arbitration_ID'] == 340 then:
859:     if row['P_CAN_ID_329'] >= 0.5 and row['N_CAN_ID_42D'] >= 0.5 then:
860:         return 'normal'
861:     else if row['N_CAN_ID_389'] >= 0.5 and row['P_CAN_ID_2B0'] >= 0.5 then:
862:         return 'normal'
863:     else if row['P_CAN_ID_2B0'] >= 0.5 and row['N_CAN_ID_485'] >= 0.5 then:
864:         return 'normal'
865:     else if row['P_CAN_ID_2B0'] >= 0.5 and row['N_CAN_ID_42D'] >= 0.5 then:
866:         return 'normal'
867:     else if row['P_CAN_ID_2B0'] >= 0.5 and row['N_CAN_ID_381'] >= 0.5 then:
868:         return 'normal'
869:     else if row['P_CAN_ID_2B0'] >= 0.5 and row['N_CAN_ID_484'] >= 0.5 then:
870:         return 'normal'
871:     else if row['P_CAN_ID_2B0'] >= 0.5 and row['N_CAN_ID_421'] >= 0.5 then:
872:         return 'normal'
873:     else if row['P_CAN_ID_220'] >= 0.5 and row['N_CAN_ID_42D'] >= 0.5 then:
874:         return 'normal'
875:     else if row['N_CAN_ID_485'] >= 0.5 and row['P_CAN_ID_260'] >= 0.5 then:
876:         return 'normal'
877:     else if row['N_CAN_ID_42D'] >= 0.5 and row['P_CAN_ID_260'] >= 0.5 then:
878:         return 'normal'
879:     else if row['P_CAN_ID_260'] >= 0.5 and row['N_CAN_ID_484'] >= 0.5 then:
880:         return 'normal'
881:     else if row['P_CAN_ID_260'] >= 0.5 and row['N_CAN_ID_47F'] >= 0.5 then:
882:         return 'normal'
883:     else if row['D6'] >= 20.5 and row['D4'] >= 35.0 and row['D5'] < 1.5 then:
884:         return 'normal'
885:     else if row['D6'] >= 20.5 and row['D1'] < 0.5 and row['N_CAN_ID_389'] >= 0.5 then:
886:         return 'normal'
887:     else if row['D6'] >= 20.5 and row['D1'] < 0.5 and row['N_CAN_ID_421'] >= 0.5 then:
888:         return 'normal'
889:     else if row['D6'] >= 20.5 and row['D2'] < 0.5 and row['P_CAN_ID_389'] >= 0.5 then:
890:         return 'normal'
891:     else if row['D3'] >= 35.5 and row['N_CAN_ID_42D'] >= 0.5 then:
892:         return 'normal'
893:     else if row['P_CAN_ID_220'] >= 0.5 and row['N_CAN_ID_484'] >= 0.5 then:
894:         return 'normal'
895:     else if row['D6'] >= 20.5 and row['D5'] < 1.5 and row['P_CAN_ID_220'] >= 0.5 then:
896:         return 'normal'
897:     else if row['D6'] >= 20.5 and row['D5'] < 1.5 and row['N_CAN_ID_386'] >= 0.5 then:
898:         return 'normal'
899:     else if row['D1'] < 0.5 and row['D3'] >= 35.5 and row['P_CAN_ID_329'] >= 0.5 then:
900:         return 'normal'
901:     else if row['D1'] < 0.5 and row['D3'] >= 35.5 and row['P_CAN_ID_2B0'] >= 0.5 then:
902:         return 'normal'
903:     else if row['D1'] < 0.5 and row['D3'] >= 35.5 and row['P_CAN_ID_220'] >= 0.5 then:
904:         return 'normal'
905:     else if row['D1'] < 0.5 and row['D3'] >= 35.5 and row['N_CAN_ID_484'] >= 0.5 then:
906:         return 'normal'
907:     else if row['D1'] < 0.5 and row['D3'] >= 35.5 and row['N_CAN_ID_387'] >= 0.5 then:
908:         return 'normal'
909:     else if row['D1'] < 0.5 and row['D3'] >= 35.5 and row['N_CAN_ID_420'] >= 0.5 then:
910:         return 'normal'
911:     else if row['D7'] >= 47.5 and row['D2'] < 0.5 and row['P_CAN_ID_421'] >= 0.5 then:
912:         return 'normal'
913:     else if row['D0'] < 0.5 and row['D3'] >= 35.5 and row['P_CAN_ID_541'] >= 0.5 then:
914:         return 'normal'
915: else
916:     return 'attack'
917: else if row['Arbitration_ID'] == 484 then:
918:     if row['D6'] >= 251.5 and row['D2'] >= 251.5 then:
919:         return 'normal'
920:     else if row['TimePeriod'] >= 0.060615062713623 and row['P_CAN_ID_479'] >= 0.5 then:
921:         return 'normal'
922:     else if row['TimePeriod'] >= 0.060615062713623 and row['D7'] >= 61.5 and row['D3'] >= 61.5 then:
923:         return 'normal'
924:     else if row['D3'] >= 61.5 and row['D1'] < 0.5 and row['N_CAN_ID_485'] >= 0.5 then:
925:         return 'normal'
926:     else if row['D3'] >= 61.5 and row['D1'] < 0.5 and row['N_CAN_ID_48A'] >= 0.5 then:
927:         return 'normal'
928:     else if row['D3'] >= 61.5 and row['D1'] < 0.5 and row['P_CAN_ID_42D'] >= 0.5 then:
929:         return 'normal'
930:     else if row['D3'] >= 61.5 and row['TimeInterval'] >= 0.00024354457855214998 and row['N_CAN_ID_53E'] >= 0.5 then:
931:         return 'normal'

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932:   else if row['D3'] >= 61.5 and row['P_CAN_ID_340'] >= 0.5 and row['N_CAN_ID_251'] >= 0.5 then:
933:       return 'normal'
934:   else if row['P_CAN_ID_340'] >= 0.5 and row['DLC'] >= 7.5 and row['N_CAN_ID_47F'] >= 0.5 then:
935:       return 'normal'
936:   else if row['D3'] >= 61.5 and row['N_CAN_ID_541'] >= 0.5 then:
937:       return 'normal'
938:   else if row['TimeInterval'] >= 0.00024354457855214998 and row['N_CAN_ID_50A'] >= 0.5 then:
939:       return 'normal'
940:   else if row['P_CAN_ID_340'] >= 0.5 and row['N_CAN_ID_492'] >= 0.5 then:
941:       return 'normal'
942:   else if row['D3'] >= 61.5 and row['D1'] < 0.5 and row['D0'] >= 6.5 then:
943:       return 'normal'
944:   else
945:       return 'attack'
946:   else if row['Arbitration_ID'] == 483 then:
947:       if row['P_CAN_ID_38D'] >= 0.5 and row['D1'] < 0.5 and row['D0'] >= 18.5 then:
948:           return 'normal'
949:       else if row['D1'] < 0.5 and row['D0'] >= 18.5 and row['N_CAN_ID_420'] >= 0.5 then:
950:           return 'normal'
951:       else if row['TimePeriod'] >= 0.19876098632812494 and row['D0'] >= 18.5 and row['P_CAN_ID_340'] >= 0.5 then:
952:           return 'normal'
953:       else if row['D3'] < 0.5 and row['D7'] < 0.5 and row['P_CAN_ID_386'] >= 0.5 then:
954:           return 'normal'
955:       else if row['D3'] < 0.5 and row['TimeInterval'] >= 0.000246524810791 and row['P_CAN_ID_391'] >= 0.5 then:
956:           return 'normal'
957:       else if row['D6'] < 0.5 and row['D0'] >= 18.5 and row['N_CAN_ID_48A'] >= 0.5 then:
958:           return 'normal'
959:       else
960:           return 'attack'
961:   else if row['Arbitration_ID'] == 410 then:
962:       if row['TimePeriod'] >= 0.19916999340057365 and row['P_CAN_ID_436'] >= 0.5 then:
963:           return 'normal'
964:       else if row['TimePeriod'] >= 0.19916999340057365 and row['N_CAN_ID_436'] >= 0.5 then:
965:           return 'normal'
966:       else if row['TimePeriod'] >= 0.19916999340057365 and row['D0'] >= 88.0 and row['N_CAN_ID_420'] >= 0.5 then:
967:           return 'normal'
968:       else if row['TimePeriod'] >= 0.19916999340057365 and row['D2'] >= 63.5 and row['D3'] < 0.5 then:
969:           return 'normal'
970:       else
971:           return 'attack'
972:   else if row['Arbitration_ID'] == 412 then:
973:       if row['TimePeriod'] >= 0.19913184642791745 and row['N_CAN_ID_453'] >= 0.5 then:
974:           return 'normal'
975:       else if row['D0'] >= 127.5 and row['D1'] < 0.5 then:
976:           return 'normal'
977:       else
978:           return 'attack'
979:   else if row['Arbitration_ID'] == 479 then:
980:       if row['TimePeriod'] >= 0.0994058847427368 and row['D0'] >= 69.0 and row['N_CAN_ID_391'] >= 0.5 then:
981:           return 'normal'
982:       else if row['TimePeriod'] >= 0.0994058847427368 and row['D0'] >= 69.0 and row['N_CAN_ID_484'] >= 0.5 then:
983:           return 'normal'
984:       else if row['TimePeriod'] >= 0.0994058847427368 and row['N_CAN_ID_130'] >= 0.5 and row['P_CAN_ID_389'] >= 0.5 then:
985:           return 'normal'
986:       else if row['D0'] >= 69.0 and row['P_CAN_ID_368'] >= 0.5 and row['D3'] < 0.5 then:
987:           return 'normal'
988:       else if row['D0'] >= 69.0 and row['D3'] < 0.5 and row['D1'] < 0.5 then:
989:           return 'normal'
990:       else
991:           return 'attack'
992:   else if row['Arbitration_ID'] == 420 then:
993:       if row['D4'] >= 250.0 and row['D6'] >= 105.5 then:
994:           return 'normal'
995:       else
996:           return 'attack'
997:   else if row['Arbitration_ID'] == 470 then:
998:       if row['D4'] >= 79.5 and row['N_CAN_ID_53E'] >= 0.5 then:
999:           return 'normal'
1000:       else if row['D6'] >= 83.5 and row['N_CAN_ID_4A9'] >= 0.5 then:
1001:           return 'normal'
1002:       else if row['D7'] >= 64.5 and row['N_CAN_ID_544'] >= 0.5 then:
1003:           return 'normal'
1004:       else if row['D5'] >= 79.5 and row['N_CAN_ID_541'] >= 0.5 then:
1005:           return 'normal'
1006:       else if row['P_CAN_ID_366'] >= 0.5 and row['N_CAN_ID_391'] >= 0.5 then:
1007:           return 'normal'
1008:       else if row['D4'] >= 79.5 and row['D6'] >= 83.5 and row['D1'] >= 64.5 then:
1009:           return 'normal'
1010:       else if row['D4'] >= 79.5 and row['D3'] < 5.5 and row['D0'] >= 20.5 then:
1011:           return 'normal'
1012:       else
1013:           return 'attack'
1014:   else if row['Arbitration_ID'] == 421 then:
1015:       if row['D0'] >= 253.0 and row['D4'] >= 225.5 then:
1016:           return 'normal'

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1017:     else
1018:         return 'attack'
1019: else if row['Arbitration_ID'] == '387' then:
1020:     if row['D0'] >= 242.5 and row['D5'] >= 200.5 then:
1021:         return 'normal'
1022:     else if row['D2'] >= 53.5 and row['N_CAN_ID_453'] >= 0.5 then:
1023:         return 'normal'
1024:     else if row['D2'] >= 53.5 and row['D3'] >= 112.5 and row['N_CAN_ID_490'] >= 0.5 then:
1025:         return 'normal'
1026:     else if row['D2'] >= 53.5 and row['N_CAN_ID_356'] >= 0.5 and row['D1'] >= 45.5 then:
1027:         return 'normal'
1028:     else if row['D2'] >= 53.5 and row['P_CAN_ID_368'] >= 0.5 and row['N_CAN_ID_394'] >= 0.5 then:
1029:         return 'normal'
1030:     else if row['D3'] >= 112.5 and row['D1'] >= 45.5 and row['N_CAN_ID_394'] >= 0.5 then:
1031:         return 'normal'
1032:     else if row['D7'] < 0.5 and row['D1'] >= 45.5 and row['P_CAN_ID_368'] >= 0.5 then:
1033:         return 'normal'
1034:     else if row['D7'] < 0.5 and row['D6'] >= 1.5 and row['P_CAN_ID_394'] >= 0.5 then:
1035:         return 'normal'
1036:     else if row['D2'] >= 53.5 and row['D7'] < 0.5 and row['P_CAN_ID_164'] >= 0.5 then:
1037:         return 'normal'
1038:     else if row['D2'] >= 53.5 and row['D7'] < 0.5 and row['D6'] >= 1.5 then:
1039:         return 'normal'
1040:     else if row['D3'] >= 112.5 and row['P_CAN_ID_164'] >= 0.5 and row['N_CAN_ID_394'] >= 0.5 then:
1041:         return 'normal'
1042:     else if row['D3'] >= 112.5 and row['D6'] >= 1.5 and row['N_CAN_ID_394'] >= 0.5 then:
1043:         return 'normal'
1044:     else if row['D3'] >= 112.5 and row['D6'] >= 1.5 and row['N_CAN_ID_490'] >= 0.5 then:
1045:         return 'normal'
1046:     else if row['N_CAN_ID_356'] >= 0.5 and row['D7'] < 0.5 and row['P_CAN_ID_164'] >= 0.5 then:
1047:         return 'normal'
1048:     else if row['N_CAN_ID_356'] >= 0.5 and row['D7'] < 0.5 and row['P_CAN_ID_490'] >= 0.5 then:
1049:         return 'normal'
1050:     else if row['N_CAN_ID_356'] >= 0.5 and row['TimeInterval'] < 0.0002338886260986164 and row['P_CAN_ID_340'] >= 0.5 then:
1051:         return 'normal'
1052:     else if row['D7'] < 0.5 and row['D6'] >= 1.5 and row['P_CAN_ID_394'] >= 0.5 then:
1053:         return 'normal'
1054:     else if row['TimeInterval'] < 0.0002338886260986164 and row['DLC'] >= 7.5 and row['P_CAN_ID_394'] >= 0.5 then:
1055:         return 'normal'
1056:     else if row['TimeInterval'] < 0.0002338886260986164 and row['P_CAN_ID_368'] >= 0.5 and row['N_CAN_ID_391'] >= 0.5 then:
1057:         return 'normal'
1058:     else if row['D3'] >= 112.5 and row['P_CAN_ID_368'] >= 0.5 then:
1059:         return 'normal'
1060:     else if row['D3'] >= 112.5 and row['N_CAN_ID_356'] >= 0.5 and row['D6'] >= 1.5 then:
1061:         return 'normal'
1062:     else if row['D7'] < 0.5 and row['P_CAN_ID_164'] >= 0.5 and row['D4'] < 0.5 then:
1063:         return 'normal'
1064:     else if row['N_CAN_ID_356'] >= 0.5 and row['P_CAN_ID_164'] >= 0.5 then:
1065:         return 'normal'
1066:     else if row['N_CAN_ID_356'] >= 0.5 and row['P_CAN_ID_394'] >= 0.5 then:
1067:         return 'normal'
1068:     else if row['N_CAN_ID_356'] >= 0.5 and row['P_CAN_ID_340'] >= 0.5 then:
1069:         return 'normal'
1070:     else if row['N_CAN_ID_356'] >= 0.5 and row['P_CAN_ID_490'] >= 0.5 then:
1071:         return 'normal'
1072:     else if row['P_CAN_ID_164'] >= 0.5 and row['N_CAN_ID_394'] >= 0.5 then:
1073:         return 'normal'
1074:     else if row['P_CAN_ID_368'] >= 0.5 and row['N_CAN_ID_391'] >= 0.5 then:
1075:         return 'normal'
1076:     else if row['P_CAN_ID_368'] >= 0.5 and row['N_CAN_ID_394'] >= 0.5 then:
1077:         return 'normal'
1078:     else
1079:         return 'attack'
1080: else if row['Arbitration_ID'] == '453' then:
1081:     if row['TimeInterval'] < 0.00019204616546625 and row['D2'] >= 145.5 then:
1082:         return 'normal'
1083:     else if row['D2'] >= 145.5 and row['D3'] < 0.5 and row['P_CAN_ID_381'] < 0.5 then:
1084:         return 'normal'
1085:     else if row['DLC'] < 5.5 and row['D1'] >= 135.5 then:
1086:         return 'normal'
1087:     else
1088:         return 'attack'
1089: else if row['Arbitration_ID'] == '356' then:
1090:     if row['N_CAN_ID_366'] >= 0.5 and row['P_CAN_ID_386'] >= 0.5 then:
1091:         return 'normal'
1092:     else if row['N_CAN_ID_366'] >= 0.5 and row['P_CAN_ID_394'] >= 0.5 then:
1093:         return 'normal'
1094:     else if row['N_CAN_ID_366'] >= 0.5 and row['P_CAN_ID_389'] >= 0.5 then:
1095:         return 'normal'
1096:     else if row['N_CAN_ID_366'] >= 0.5 and row['P_CAN_ID_490'] >= 0.5 then:
1097:         return 'normal'
1098:     else if row['N_CAN_ID_366'] >= 0.5 and row['P_CAN_ID_593'] >= 0.5 then:
1099:         return 'normal'
1100:     else if row['N_CAN_ID_367'] >= 0.5 and row['P_CAN_ID_164'] >= 0.5 then:
1101:         return 'normal'

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1102: else if row['N_CAN_ID_367'] >= 0.5 and row['P_CAN_ID_394'] >= 0.5 then:
1103:     return 'normal'
1104: else if row['N_CAN_ID_366'] >= 0.5 and row['D3'] >= 127.5 and row['D7'] < 0.5 then:
1105:     return 'normal'
1106: else if row['D3'] >= 127.5 and row['D7'] < 0.5 and row['P_CAN_ID_387'] >= 0.5 then:
1107:     return 'normal'
1108: else if row['D3'] >= 127.5 and row['D5'] < 0.5 and row['N_CAN_ID_367'] >= 0.5 then:
1109:     return 'normal'
1110: else if row['D3'] >= 127.5 and row['D1'] < 0.5 and row['P_CAN_ID_386'] >= 0.5 then:
1111:     return 'normal'
1112: else if row['D3'] >= 127.5 and row['D1'] < 0.5 and row['P_CAN_ID_38D'] >= 0.5 then:
1113:     return 'normal'
1114: else if row['D3'] >= 127.5 and row['D2'] < 0.5 and row['P_CAN_ID_389'] >= 0.5 then:
1115:     return 'normal'
1116: else if row['N_CAN_ID_367'] >= 0.5 and row['P_CAN_ID_164'] >= 0.5 then:
1117:     return 'normal'
1118: else if row['N_CAN_ID_367'] >= 0.5 and row['P_CAN_ID_394'] >= 0.5 then:
1119:     return 'normal'
1120: else if row['D7'] < 0.5 and row['D1'] < 0.5 and row['P_CAN_ID_593'] >= 0.5 then:
1121:     return 'normal'
1122: else if row['D7'] < 0.5 and row['D4'] >= 8.5 and row['P_CAN_ID_490'] >= 0.5 then:
1123:     return 'normal'
1124: else if row['D7'] < 0.5 and row['D2'] < 0.5 and row['N_CAN_ID_367'] >= 0.5 then:
1125:     return 'normal'
1126: else if row['D4'] >= 8.5 and row['D5'] < 0.5 and row['P_CAN_ID_164'] >= 0.5 then:
1127:     return 'normal'
1128: else if row['D4'] >= 8.5 and row['D5'] < 0.5 and row['P_CAN_ID_389'] >= 0.5 then:
1129:     return 'normal'
1130: else if row['D4'] >= 8.5 and row['D5'] < 0.5 and row['P_CAN_ID_38D'] >= 0.5 then:
1131:     return 'normal'
1132: else if row['P_CAN_ID_387'] >= 0.5 then:
1133:     return 'normal'
1134: else if row['P_CAN_ID_386'] >= 0.5 then:
1135:     return 'normal'
1136: else if row['D4'] >= 8.5 and row['P_CAN_ID_394'] >= 0.5 then:
1137:     return 'normal'
1138: else if row['D7'] < 0.5 and row['D1'] < 0.5 and row['P_CAN_ID_140'] >= 0.5 then:
1139:     return 'normal'
1140: else
1141:     return 'attack'
1142: else if row['Arbitration_ID'] == '436' then:
1143:     if row['TimeInterval'] < 0.00017952919006340002 and row['N_CAN_ID_453'] >= 0.5 then:
1144:         return 'normal'
1145:     else if row['TimeInterval'] < 0.00017952919006340002 and row['N_CAN_ID_410'] >= 0.5 then:
1146:         return 'normal'
1147:     else if row['TimeInterval'] < 0.00017952919006340002 and row['P_CAN_ID_410'] >= 0.5 then:
1148:         return 'normal'
1149:     else if row['DLC'] < 4.5 and row['N_CAN_ID_470'] >= 0.5 then:
1150:         return 'normal'
1151:     else if row['D2'] < 0.5 and row['N_CAN_ID_541'] >= 0.5 then:
1152:         return 'normal'
1153:     else if row['TimeInterval'] < 0.00017952919006340002 and row['P_CAN_ID_368'] >= 0.5 and row['N_CAN_ID_260'] >= 0.5 then:
1154:         return 'normal'
1155:     else if row['TimeInterval'] < 0.00017952919006340002 and row['P_CAN_ID_368'] >= 0.5 and row['N_CAN_ID_130'] >= 0.5 then:
1156:         return 'normal'
1157:     else if row['TimeInterval'] < 0.00017952919006340002 and row['P_CAN_ID_368'] >= 0.5 and row['N_CAN_ID_47F'] >= 0.5 then:
1158:         return 'normal'
1159:     else if row['TimeInterval'] < 0.00017952919006340002 and row['P_CAN_ID_368'] >= 0.5 then:
1160:         return 'normal'
1161:     else if row['TimeInterval'] < 0.00017952919006340002 and row['N_CAN_ID_4F1'] >= 0.5 then:
1162:         return 'normal'
1163:     else if row['TimeInterval'] < 0.00017952919006340002 and row['N_CAN_ID_391'] >= 0.5 then:
1164:         return 'normal'
1165:     else if row['TimeInterval'] < 0.00017952919006340002 and row['N_CAN_ID_484'] >= 0.5 then:
1166:         return 'normal'
1167:     else if row['P_CAN_ID_389'] >= 0.5 and row['N_CAN_ID_495'] >= 0.5 then:
1168:         return 'normal'
1169:     else if row['DLC'] < 4.5 and row['P_CAN_ID_389'] >= 0.5 and row['N_CAN_ID_391'] >= 0.5 then:
1170:         return 'normal'
1171:     else
1172:         return 'attack'
1173: else if row['Arbitration_ID'] == '389' then:
1174:     if row['D6'] >= 28.5 and row['N_CAN_ID_48C'] >= 0.5 then:
1175:         return 'normal'
1176:     else if row['D7'] < 0.5 and row['N_CAN_ID_479'] >= 0.5 then:
1177:         return 'normal'
1178:     else if row['D7'] < 0.5 and row['N_CAN_ID_44E'] >= 0.5 then:
1179:         return 'normal'
1180:     else if row['D7'] < 0.5 and row['N_CAN_ID_4CB'] >= 0.5 then:
1181:         return 'normal'
1182:     else if row['D3'] < 32.5 and row['P_CAN_ID_50A'] >= 0.5 then:
1183:         return 'normal'
1184:     else if row['P_CAN_ID_421'] >= 0.5 and row['N_CAN_ID_485'] >= 0.5 then:
1185:         return 'normal'
1186:     else if row['P_CAN_ID_421'] >= 0.5 and row['N_CAN_ID_391'] >= 0.5 then:

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1187:     return 'normal'
1188: else if row['P_CAN_ID_421'] >= 0.5 and row['N_CAN_ID_436'] >= 0.5 then:
1189:     return 'normal'
1190: else if row['D6'] >= 28.5 and row['D7'] < 0.5 and row['P_CAN_ID_421'] >= 0.5 then:
1191:     return 'normal'
1192: else if row['D6'] >= 28.5 and row['D7'] < 0.5 and row['D4'] < 0.5 then:
1193:     return 'normal'
1194: else if row['D3'] < 32.5 and row['P_CAN_ID_421'] >= 0.5 then:
1195:     return 'normal'
1196: else if row['D0'] < 0.5 and row['P_CAN_ID_340'] >= 0.5 and row['N_CAN_ID_251'] >= 0.5 then:
1197:     return 'normal'
1198: else
1199:     return 'attack'
1200: else if row['Arbitration_ID'] == '394' then:
1201:     if row['D7'] >= 247.5 and row['D4'] >= 254.5 then:
1202:         return 'normal'
1203:     else if row['D5'] >= 130.5 and row['D6'] >= 47.5 and row['D0'] < 0.5 then:
1204:         return 'normal'
1205:     else if row['D3'] < 0.5 and row['P_CAN_ID_164'] >= 0.5 and row['N_CAN_ID_387'] >= 0.5 then:
1206:         return 'normal'
1207:     else if row['D3'] < 0.5 and row['P_CAN_ID_164'] >= 0.5 and row['N_CAN_ID_490'] >= 0.5 then:
1208:         return 'normal'
1209:     else if row['N_CAN_ID_164'] >= 0.5 and row['D1'] >= 31.0 and row['P_CAN_ID_492'] >= 0.5 then:
1210:         return 'normal'
1211:     else if row['N_CAN_ID_164'] >= 0.5 and row['D1'] >= 31.0 and row['P_CAN_ID_4F1'] >= 0.5 then:
1212:         return 'normal'
1213:     else if row['D1'] >= 31.0 and row['D2'] < 0.5 and row['P_CAN_ID_2B0'] >= 0.5 then:
1214:         return 'normal'
1215:     else if row['D1'] >= 31.0 and row['D2'] < 0.5 and row['P_CAN_ID_381'] >= 0.5 then:
1216:         return 'normal'
1217:     else if row['D1'] >= 31.0 and row['D2'] < 0.5 and row['P_CAN_ID_387'] >= 0.5 then:
1218:         return 'normal'
1219:     else if row['D3'] < 0.5 and row['N_CAN_ID_164'] >= 0.5 then:
1220:         return 'normal'
1221:     else
1222:         return 'attack'
1223: else if row['Arbitration_ID'] == '251' then:
1224:     if row['N_CAN_ID_2B0'] >= 0.5 and row['D5'] >= 226.5 then:
1225:         return 'normal'
1226:     else if row['D0'] >= 236.5 and row['D5'] >= 226.5 then:
1227:         return 'normal'
1228:     else if row['D7'] >= 126.5 and row['D1'] < 3.5 and row['P_CAN_ID_5CD'] >= 0.5 then:
1229:         return 'normal'
1230:     else if row['D2'] >= 16.5 and row['D1'] < 3.5 and row['P_CAN_ID_50C'] >= 0.5 then:
1231:         return 'normal'
1232:     else if row['D1'] < 3.5 and row['D3'] >= 48.5 and row['P_CAN_ID_507'] >= 0.5 then:
1233:         return 'normal'
1234:     else if row['P_CAN_ID_381'] >= 0.5 then:
1235:         return 'normal'
1236:     else if row['P_CAN_ID_492'] >= 0.5 then:
1237:         return 'normal'
1238:     else if row['D7'] >= 126.5 and row['D1'] < 3.5 then:
1239:         return 'normal'
1240:     else if row['D7'] >= 126.5 and row['D2'] >= 16.5 then:
1241:         return 'normal'
1242:     else if row['D7'] >= 126.5 and row['D6'] >= 6.5 and row['P_CAN_ID_5CD'] >= 0.5 then:
1243:         return 'normal'
1244:     else
1245:         return 'attack'
1246: else if row['Arbitration_ID'] == '367' then:
1247:     if row['N_CAN_ID_368'] >= 0.5 and row['P_CAN_ID_366'] >= 0.5 then:
1248:         return 'normal'
1249:     else if row['N_CAN_ID_368'] >= 0.5 and row['D3'] < 0.5 then:
1250:         return 'normal'
1251:     else if row['D3'] < 0.5 and row['P_CAN_ID_356'] >= 0.5 then:
1252:         return 'normal'
1253:     else if row['P_CAN_ID_366'] >= 0.5 and row['D6'] >= 16.5 and row['D5'] < 0.5 then:
1254:         return 'normal'
1255:     else
1256:         return 'attack'
1257: else if row['Arbitration_ID'] == '391' then:
1258:     if row['N_CAN_ID_4F1'] >= 0.5 and row['P_CAN_ID_260'] >= 0.5 then:
1259:         return 'normal'
1260:     else if row['N_CAN_ID_4F1'] >= 0.5 and row['P_CAN_ID_2B0'] >= 0.5 then:
1261:         return 'normal'
1262:     else if row['N_CAN_ID_4F1'] >= 0.5 and row['P_CAN_ID_541'] >= 0.5 then:
1263:         return 'normal'
1264:     else if row['N_CAN_ID_4F1'] >= 0.5 and row['P_CAN_ID_58B'] >= 0.5 then:
1265:         return 'normal'
1266:     else if row['N_CAN_ID_4F1'] >= 0.5 and row['P_CAN_ID_492'] >= 0.5 then:
1267:         return 'normal'
1268:     else if row['N_CAN_ID_4F1'] >= 0.5 and row['P_CAN_ID_559'] >= 0.5 then:
1269:         return 'normal'
1270:     else if row['N_CAN_ID_4F1'] >= 0.5 and row['P_CAN_ID_520'] >= 0.5 then:
1271:         return 'normal'

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1272: else if row['N_CAN_ID_4F1'] >= 0.5 and row['P_CAN_ID_507'] >= 0.5 then:
1273:     return 'normal'
1274: else if row['N_CAN_ID_4F1'] >= 0.5 and row['P_CAN_ID_553'] >= 0.5 then:
1275:     return 'normal'
1276: else if row['D2'] < 0.5 and row['P_CAN_ID_436'] >= 0.5 then:
1277:     return 'normal'
1278: else if row['D2'] < 0.5 and row['P_CAN_ID_479'] >= 0.5 then:
1279:     return 'normal'
1280: else if row['D3'] < 0.5 and row['D5'] < 0.5 and row['N_CAN_ID_453'] >= 0.5 then:
1281:     return 'normal'
1282: else if row['D3'] < 0.5 and row['N_CAN_ID_4F1'] >= 0.5 and row['P_CAN_ID_329'] >= 0.5 then:
1283:     return 'normal'
1284: else if row['D3'] < 0.5 and row['N_CAN_ID_4F1'] >= 0.5 and row['P_CAN_ID_220'] >= 0.5 then:
1285:     return 'normal'
1286: else if row['D3'] < 0.5 and row['D6'] >= 1.5 and row['P_CAN_ID_38D'] >= 0.5 then:
1287:     return 'normal'
1288: else if row['D1'] < 0.5 and row['D7'] >= 76.5 and row['N_CAN_ID_436'] >= 0.5 then:
1289:     return 'normal'
1290: else if row['D1'] < 0.5 and row['D7'] >= 76.5 and row['N_CAN_ID_485'] >= 0.5 then:
1291:     return 'normal'
1292: else if row['D1'] < 0.5 and row['D5'] < 0.5 and row['N_CAN_ID_421'] >= 0.5 then:
1293:     return 'normal'
1294: else if row['D1'] < 0.5 and row['N_CAN_ID_4F1'] >= 0.5 and row['P_CAN_ID_381'] >= 0.5 then:
1295:     return 'normal'
1296: else if row['D7'] >= 76.5 and row['D5'] < 0.5 and row['N_CAN_ID_420'] >= 0.5 then:
1297:     return 'normal'
1298: else if row['D7'] >= 76.5 and row['D2'] < 0.5 and row['P_CAN_ID_470'] >= 0.5 then:
1299:     return 'normal'
1300: else if row['D7'] >= 76.5 and row['D2'] < 0.5 and row['P_CAN_ID_453'] >= 0.5 then:
1301:     return 'normal'
1302: else if row['D3'] < 0.5 and row['N_CAN_ID_4F1'] >= 0.5 then:
1303:     return 'normal'
1304: else if row['D3'] < 0.5 and row['P_CAN_ID_220'] >= 0.5 then:
1305:     return 'normal'
1306: else if row['D7'] >= 76.5 and row['N_CAN_ID_410'] >= 0.5 then:
1307:     return 'normal'
1308: else if row['D4'] < 0.5 and row['P_CAN_ID_387'] >= 0.5 then:
1309:     return 'normal'
1310: else if row['P_CAN_ID_381'] >= 0.5 and row['N_CAN_ID_484'] >= 0.5 then:
1311:     return 'normal'
1312: else if row['D3'] < 0.5 and row['D1'] < 0.5 and row['P_CAN_ID_58B'] >= 0.5 then:
1313:     return 'normal'
1314: else if row['D3'] < 0.5 and row['D5'] < 0.5 and row['P_CAN_ID_260'] >= 0.5 then:
1315:     return 'normal'
1316: else if row['D3'] < 0.5 and row['D5'] < 0.5 and row['N_CAN_ID_484'] >= 0.5 then:
1317:     return 'normal'
1318: else if row['D3'] < 0.5 and row['D0'] < 0.5 and row['P_CAN_ID_38D'] >= 0.5 then:
1319:     return 'normal'
1320: else if row['D3'] < 0.5 and row['D0'] < 0.5 and row['P_CAN_ID_389'] >= 0.5 then:
1321:     return 'normal'
1322: else if row['D3'] < 0.5 and row['D2'] < 0.5 and row['N_CAN_ID_483'] >= 0.5 then:
1323:     return 'normal'
1324: else if row['D3'] < 0.5 and row['P_CAN_ID_368'] >= 0.5 and row['N_CAN_ID_436'] >= 0.5 then:
1325:     return 'normal'
1326: else if row['D1'] < 0.5 and row['D7'] >= 76.5 and row['D5'] < 0.5 then:
1327:     return 'normal'
1328: else
1329:     return 'attack'
1330: else if row['Arbitration_ID'] == '368' then:
1331:     if row['P_CAN_ID_367'] >= 0.5 and row['D3'] < 0.5 then:
1332:         return 'normal'
1333:     else if row['D7'] >= 63.5 and row['N_CAN_ID_470'] >= 0.5 and row['P_CAN_ID_366'] < 0.5 then:
1334:         return 'normal'
1335:     else if row['D1'] < 0.5 and row['D5'] >= 41.0 and row['N_CAN_ID_42D'] >= 0.5 then:
1336:         return 'normal'
1337:     else if row['D3'] < 0.5 and row['N_CAN_ID_412'] >= 0.5 then:
1338:         return 'normal'
1339:     else if row['D3'] < 0.5 and row['N_CAN_ID_4CB'] >= 0.5 then:
1340:         return 'normal'
1341:     else if row['D3'] < 0.5 and row['N_CAN_ID_44E'] >= 0.5 then:
1342:         return 'normal'
1343:     else if row['D3'] < 0.5 and row['D7'] >= 63.5 and row['N_CAN_ID_436'] >= 0.5 then:
1344:         return 'normal'
1345:     else if row['D3'] < 0.5 and row['D7'] >= 63.5 and row['N_CAN_ID_593'] >= 0.5 then:
1346:         return 'normal'
1347:     else if row['D3'] < 0.5 and row['D6'] >= 9.5 and row['N_CAN_ID_479'] >= 0.5 then:
1348:         return 'normal'
1349:     else if row['D3'] < 0.5 and row['D6'] >= 9.5 and row['N_CAN_ID_520'] >= 0.5 then:
1350:         return 'normal'
1351:     else if row['D5'] >= 41.0 and row['D2'] < 0.5 and row['N_CAN_ID_420'] >= 0.5 then:
1352:         return 'normal'
1353:     else if row['D5'] >= 41.0 and row['TimeInterval'] >= 0.00024354457855214998 and row['N_CAN_ID_48A'] >= 0.5 then:
1354:         return 'normal'
1355:     else if row['TimeInterval'] >= 0.00024354457855214998 and row['D4'] < 0.5 and row['N_CAN_ID_387'] >= 0.5 then:
1356:         return 'normal'

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1357:     else
1358:         return 'attack'
1359: else if row['Arbitration_ID'] == '366' then:
1360:     if row['TimeInterval'] < 0.00022697448730464375 and row['P_CAN_ID_356'] >= 0.5 then:
1361:         return 'normal'
1362:     else if row['N_CAN_ID_367'] >= 0.5 and row['D3'] < 26.5 then:
1363:         return 'normal'
1364:     else if row['TimeInterval'] < 0.00022697448730464375 and row['D1'] >= 47.5 and row['P_CAN_ID_453'] >= 0.5 then:
1365:         return 'normal'
1366:     else if row['TimeInterval'] < 0.00022697448730464375 and row['D1'] >= 47.5 and row['P_CAN_ID_386'] >= 0.5 then:
1367:         return 'normal'
1368:     else if row['TimeInterval'] < 0.00022697448730464375 and row['D0'] >= 21.5 and row['N_CAN_ID_470'] >= 0.5 then:
1369:         return 'normal'
1370:     else if row['DLC'] < 7.5 and row['D1'] >= 47.5 and row['D0'] >= 21.5 then:
1371:         return 'normal'
1372:     else if row['DLC'] < 7.5 and row['P_CAN_ID_356'] >= 0.5 then:
1373:         return 'normal'
1374:     else if row['N_CAN_ID_367'] >= 0.5 and row['D3'] < 26.5 then:
1375:         return 'normal'
1376:     else if row['DLC'] < 7.5 and row['D4'] >= 19.5 and row['P_CAN_ID_453'] >= 0.5 then:
1377:         return 'normal'
1378:     else if row['D4'] >= 19.5 and row['D5'] < 0.5 and row['P_CAN_ID_386'] >= 0.5 then:
1379:         return 'normal'
1380:     else
1381:         return 'attack'
1382: else if row['Arbitration_ID'] == '593' then:
1383:     if row['D2'] >= 254.0 and row['D5'] >= 254.0 then:
1384:         return 'normal'
1385:     else
1386:         return 'attack'
1387: else
1388:     return 'attack'

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