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1 "/Users/venkatanagasakiurajantallam/
PyCharm Projects/ATA Project/.venv/bin/
python" /Users/
venkatanagasakiurajantallam/PyCharm
Projects/ATA Project/src/live_loop.py
2 Loading historical data for FR...
3   Total: 24097 hours | Train: 19277 |
Dev: 2409 | Test: 2411
4 Fitting initial SARIMA model...
5
6 =====
=====
7 Starting Live Simulation for FR
8 Strategy: rolling_sarima
9 =====
=====
10
11 Simulating 2000 hours from index 21686
to 23686
12
13 [Refit] Adapting SARIMA on 2161 hours
(window=90d)
14     ✓ Full refit completed
15 [    0] 2020-06-22T13:00:00Z | Adapted (
reason=initial) | elapsed=11.503s
16 [Refit] Adapting SARIMA on 2161 hours
(window=90d)
17     ✓ Incremental update on 12 new
points
18 [  11] 2020-06-23T00:00:00Z | Adapted (
reason=scheduled) | elapsed=5.264s
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19 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
20     ✓ Incremental update on 25 new  
points  
21 [ 35] 2020-06-24T00:00:00Z | Adapted (  
reason=scheduled) | elapsed=4.910s  
22 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
23     ✓ Incremental update on 25 new  
points  
24 [ 59] 2020-06-25T00:00:00Z | Adapted (  
reason=scheduled) | elapsed=5.853s  
25 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
26     ✓ Incremental update on 25 new  
points  
27 [ 83] 2020-06-26T00:00:00Z | Adapted (  
reason=scheduled) | elapsed=5.325s  
28 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
29     ✓ Incremental update on 25 new  
points  
30 [ 107] 2020-06-27T00:00:00Z | Adapted (  
reason=scheduled) | elapsed=5.764s  
31 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
32     ✓ Incremental update on 25 new  
points  
33 [ 131] 2020-06-28T00:00:00Z | Adapted (  
reason=scheduled) | elapsed=6.221s  
34 [Refit] Adapting SARIMA on 2161 hours
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34 (window=90d)
35     ✓ Incremental update on 25 new
points
36 [ 155] 2020-06-29T00:00:00Z | Adapted (
reason=scheduled) | elapsed=6.031s
37 [Metrics] MASE: 1.9775, PI Coverage: 0
.4583
38 [Refit] Adapting SARIMA on 2161 hours
(window=90d)
39     ✓ Incremental update on 25 new
points
40 [ 179] 2020-06-30T00:00:00Z | Adapted (
reason=scheduled) | elapsed=5.671s
41 [Refit] Adapting SARIMA on 2161 hours
(window=90d)
42     ✓ Incremental update on 25 new
points
43 [ 203] 2020-07-01T00:00:00Z | Adapted (
reason=scheduled) | elapsed=5.993s
44 [Refit] Adapting SARIMA on 2161 hours
(window=90d)
45     ✓ Incremental update on 25 new
points
46 [ 227] 2020-07-02T00:00:00Z | Adapted (
reason=scheduled) | elapsed=6.651s
47 [Refit] Adapting SARIMA on 2161 hours
(window=90d)
48     ✓ Incremental update on 25 new
points
49 [ 251] 2020-07-03T00:00:00Z | Adapted (
reason=scheduled) | elapsed=8.610s
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50 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
51     ✓ Incremental update on 25 new  
points  
52 [ 275] 2020-07-04T00:00:00Z | Adapted (  
reason=scheduled) | elapsed=7.123s  
53 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
54     ✓ Incremental update on 25 new  
points  
55 [ 299] 2020-07-05T00:00:00Z | Adapted (  
reason=scheduled) | elapsed=6.924s  
56 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
57     ✓ Incremental update on 25 new  
points  
58 [ 323] 2020-07-06T00:00:00Z | Adapted (  
reason=scheduled) | elapsed=6.580s  
59 [Metrics] MASE: 2.0186, PI Coverage: 0  
.4345  
60 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
61     ✓ Incremental update on 25 new  
points  
62 [ 347] 2020-07-07T00:00:00Z | Adapted (  
reason=scheduled) | elapsed=6.197s  
63 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
64     ✓ Incremental update on 25 new  
points  
65 [ 371] 2020-07-08T00:00:00Z | Adapted (
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65 reason=scheduled) | elapsed=5.866s
66 [Refit] Adapting SARIMA on 2161 hours
  (window=90d)
67     ✓ Incremental update on 25 new
  points
68 [ 395] 2020-07-09T00:00:00Z | Adapted (
  reason=scheduled) | elapsed=6.185s
69 [Refit] Adapting SARIMA on 2161 hours
  (window=90d)
70     ✓ Incremental update on 25 new
  points
71 [ 419] 2020-07-10T00:00:00Z | Adapted (
  reason=scheduled) | elapsed=6.531s
72 [Refit] Adapting SARIMA on 2161 hours
  (window=90d)
73     ✓ Incremental update on 25 new
  points
74 [ 443] 2020-07-11T00:00:00Z | Adapted (
  reason=scheduled) | elapsed=6.770s
75 [Refit] Adapting SARIMA on 2161 hours
  (window=90d)
76     ✓ Incremental update on 25 new
  points
77 [ 467] 2020-07-12T00:00:00Z | Adapted (
  reason=scheduled) | elapsed=6.630s
78 [Refit] Adapting SARIMA on 2161 hours
  (window=90d)
79     ✓ Incremental update on 25 new
  points
80 [ 491] 2020-07-13T00:00:00Z | Adapted (
  reason=scheduled) | elapsed=6.791s
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81 [Progress] 500/2000 hours completed
82   [Metrics] MASE: 1.8540, PI Coverage:
83     0.5655
84   [Refit] Adapting SARIMA on 2161 hours
85     (window=90d)
86     ✓ Incremental update on 25 new
87     points
88 [ 515] 2020-07-14T00:00:00Z | Adapted
89     (reason=scheduled) | elapsed=6.703s
90   [Refit] Adapting SARIMA on 2161 hours
91     (window=90d)
92     ✓ Incremental update on 25 new
93     points
94 [ 539] 2020-07-15T00:00:00Z | Adapted
95     (reason=scheduled) | elapsed=6.983s
96   [Refit] Adapting SARIMA on 2161 hours
97     (window=90d)
98     ✓ Incremental update on 25 new
99     points
100  [ 563] 2020-07-16T00:00:00Z | Adapted
101    (reason=scheduled) | elapsed=6.902s
102  [Refit] Adapting SARIMA on 2161 hours
103    (window=90d)
104    ✓ Incremental update on 25 new
105    points
106  [ 587] 2020-07-17T00:00:00Z | Adapted
107    (reason=scheduled) | elapsed=7.739s
108  [Refit] Adapting SARIMA on 2161 hours
109    (window=90d)
110    ✓ Incremental update on 25 new
111    points
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97 [ 611] 2020-07-18T00:00:00Z | Adapted
    (reason=scheduled) | elapsed=7.467s
98   [Refit] Adapting SARIMA on 2161 hours
    (window=90d)
99     ✓ Incremental update on 25 new
        points
100  [ 635] 2020-07-19T00:00:00Z | Adapted
    (reason=scheduled) | elapsed=7.058s
101  [Refit] Adapting SARIMA on 2161 hours
    (window=90d)
102    ✓ Incremental update on 25 new
        points
103  [ 659] 2020-07-20T00:00:00Z | Adapted
    (reason=scheduled) | elapsed=6.989s
104  [Metrics] MASE: 1.3372, PI Coverage:
    0.7619
105  [Refit] Adapting SARIMA on 2161 hours
    (window=90d)
106    ✓ Incremental update on 25 new
        points
107  [ 683] 2020-07-21T00:00:00Z | Adapted
    (reason=scheduled) | elapsed=7.795s
108  [Refit] Adapting SARIMA on 2161 hours
    (window=90d)
109    ✓ Incremental update on 25 new
        points
110  [ 707] 2020-07-22T00:00:00Z | Adapted
    (reason=scheduled) | elapsed=7.127s
111  [Refit] Adapting SARIMA on 2161 hours
    (window=90d)
112    ✓ Incremental update on 25 new
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112 points
113 [ 731] 2020-07-23T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=6.499s
114   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
115     ✓ Incremental update on 25 new
      points
116 [ 755] 2020-07-24T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=6.544s
117   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
118     ✓ Incremental update on 25 new
      points
119 [ 779] 2020-07-25T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=6.637s
120   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
121     ✓ Incremental update on 25 new
      points
122 [ 803] 2020-07-26T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=7.855s
123   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
124     ✓ Incremental update on 25 new
      points
125 [ 827] 2020-07-27T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=7.506s
126   [Metrics] MASE: 2.2257, PI Coverage:
      0.6488
127   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
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128      ✓ Incremental update on 25 new
          points
129 [ 851] 2020-07-28T00:00:00Z | Adapted
          (reason=scheduled) | elapsed=9.015s
130 [Refit] Adapting SARIMA on 2161 hours
          (window=90d)
131      ✓ Incremental update on 25 new
          points
132 [ 875] 2020-07-29T00:00:00Z | Adapted
          (reason=scheduled) | elapsed=6.857s
133 [Refit] Adapting SARIMA on 2161 hours
          (window=90d)
134      ✓ Incremental update on 25 new
          points
135 [ 899] 2020-07-30T00:00:00Z | Adapted
          (reason=scheduled) | elapsed=6.898s
136 [Refit] Adapting SARIMA on 2161 hours
          (window=90d)
137      ✓ Incremental update on 25 new
          points
138 [ 923] 2020-07-31T00:00:00Z | Adapted
          (reason=scheduled) | elapsed=8.702s
139 [Refit] Adapting SARIMA on 2161 hours
          (window=90d)
140      ✓ Incremental update on 25 new
          points
141 [ 947] 2020-08-01T00:00:00Z | Adapted
          (reason=scheduled) | elapsed=7.354s
142 [Refit] Adapting SARIMA on 2161 hours
          (window=90d)
143      ✓ Incremental update on 25 new
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143 points
144 [ 971] 2020-08-02T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=7.920s
145   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
146     ✓ Incremental update on 8 new
      points
147 [ 978] 2020-08-02T07:00:00Z | Adapted
      (reason=drift) | elapsed=7.466s
148   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
149     ✓ Incremental update on 2 new
      points
150 [ 979] 2020-08-02T08:00:00Z | Adapted
      (reason=drift) | elapsed=7.125s
151   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
152     ✓ Incremental update on 2 new
      points
153 [ 980] 2020-08-02T09:00:00Z | Adapted
      (reason=drift) | elapsed=7.123s
154   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
155     ✓ Incremental update on 2 new
      points
156 [ 981] 2020-08-02T10:00:00Z | Adapted
      (reason=drift) | elapsed=7.154s
157   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
158     ✓ Incremental update on 2 new
      points
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159 [ 982] 2020-08-02T11:00:00Z | Adapted
      (reason=drift) | elapsed=7.666s
160   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
161     ✓ Incremental update on 2 new
      points
162 [ 983] 2020-08-02T12:00:00Z | Adapted
      (reason=drift) | elapsed=7.780s
163   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
164     ✓ Incremental update on 2 new
      points
165 [ 984] 2020-08-02T13:00:00Z | Adapted
      (reason=drift) | elapsed=7.488s
166   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
167     ✓ Incremental update on 2 new
      points
168 [ 985] 2020-08-02T14:00:00Z | Adapted
      (reason=drift) | elapsed=8.437s
169   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
170     ✓ Incremental update on 2 new
      points
171 [ 986] 2020-08-02T15:00:00Z | Adapted
      (reason=drift) | elapsed=7.266s
172   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
173     ✓ Incremental update on 2 new
      points
174 [ 987] 2020-08-02T16:00:00Z | Adapted
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174 (reason=drift) | elapsed=9.364s
175 [Refit] Adapting SARIMA on 2161 hours
  (window=90d)
176     ✓ Incremental update on 2 new
  points
177 [ 988] 2020-08-02T17:00:00Z | Adapted
  (reason=drift) | elapsed=7.506s
178 [Refit] Adapting SARIMA on 2161 hours
  (window=90d)
179     ✓ Incremental update on 2 new
  points
180 [ 989] 2020-08-02T18:00:00Z | Adapted
  (reason=drift) | elapsed=7.794s
181 [Refit] Adapting SARIMA on 2161 hours
  (window=90d)
182     ✓ Incremental update on 2 new
  points
183 [ 990] 2020-08-02T19:00:00Z | Adapted
  (reason=drift) | elapsed=8.261s
184 [Refit] Adapting SARIMA on 2161 hours
  (window=90d)
185     ✓ Incremental update on 6 new
  points
186 [ 995] 2020-08-03T00:00:00Z | Adapted
  (reason=scheduled) | elapsed=7.914s
187 [Progress] 1000/2000 hours completed
188 [Metrics] MASE: 2.2870, PI Coverage:
  0.6429
189 [Refit] Adapting SARIMA on 2161 hours
  (window=90d)
190     ✓ Incremental update on 25 new
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190 points
191 [ 1019] 2020-08-04T00:00:00Z | Adapted
    (reason=scheduled) | elapsed=7.949s
192   [Refit] Adapting SARIMA on 2161 hours
    (window=90d)
193     ✓ Incremental update on 12 new
    points
194 [ 1030] 2020-08-04T11:00:00Z | Adapted
    (reason=drift) | elapsed=8.653s
195   [Refit] Adapting SARIMA on 2161 hours
    (window=90d)
196     ✓ Incremental update on 2 new
    points
197 [ 1031] 2020-08-04T12:00:00Z | Adapted
    (reason=drift) | elapsed=7.839s
198   [Refit] Adapting SARIMA on 2161 hours
    (window=90d)
199     ✓ Incremental update on 2 new
    points
200 [ 1032] 2020-08-04T13:00:00Z | Adapted
    (reason=drift) | elapsed=7.573s
201   [Refit] Adapting SARIMA on 2161 hours
    (window=90d)
202     ✓ Incremental update on 2 new
    points
203 [ 1033] 2020-08-04T14:00:00Z | Adapted
    (reason=drift) | elapsed=7.908s
204   [Refit] Adapting SARIMA on 2161 hours
    (window=90d)
205     ✓ Incremental update on 2 new
    points
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206 [ 1034] 2020-08-04T15:00:00Z | Adapted
      (reason=drift) | elapsed=8.139s
207   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
208     ✓ Incremental update on 2 new
      points
209 [ 1035] 2020-08-04T16:00:00Z | Adapted
      (reason=drift) | elapsed=7.923s
210   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
211     ✓ Incremental update on 2 new
      points
212 [ 1036] 2020-08-04T17:00:00Z | Adapted
      (reason=drift) | elapsed=7.560s
213   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
214     ✓ Incremental update on 2 new
      points
215 [ 1037] 2020-08-04T18:00:00Z | Adapted
      (reason=drift) | elapsed=10.157s
216   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
217     ✓ Incremental update on 2 new
      points
218 [ 1038] 2020-08-04T19:00:00Z | Adapted
      (reason=drift) | elapsed=8.007s
219   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
220     ✓ Incremental update on 2 new
      points
221 [ 1039] 2020-08-04T20:00:00Z | Adapted
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221 (reason=drift) | elapsed=9.549s
222 [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
223     ✓ Incremental update on 2 new
      points
224 [ 1040] 2020-08-04T21:00:00Z | Adapted
      (reason=drift) | elapsed=6.230s
225 [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
226     ✓ Incremental update on 4 new
      points
227 [ 1043] 2020-08-05T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=9.950s
228 [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
229     ✓ Incremental update on 25 new
      points
230 [ 1067] 2020-08-06T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=8.628s
231 [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
232     ✓ Incremental update on 25 new
      points
233 [ 1091] 2020-08-07T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=8.704s
234 [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
235     ✓ Incremental update on 25 new
      points
236 [ 1115] 2020-08-08T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=9.999s
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237 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
238     ✓ Incremental update on 25 new  
     points  
239 [ 1139] 2020-08-09T00:00:00Z | Adapted  
     (reason=scheduled) | elapsed=8.501s  
240 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
241     ✓ Incremental update on 25 new  
     points  
242 [ 1163] 2020-08-10T00:00:00Z | Adapted  
     (reason=scheduled) | elapsed=8.431s  
243 [Metrics] MASE: 2.9817, PI Coverage:  
     0.7440  
244 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
245     ✓ Incremental update on 25 new  
     points  
246 [ 1187] 2020-08-11T00:00:00Z | Adapted  
     (reason=scheduled) | elapsed=8.585s  
247 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
248     ✓ Incremental update on 25 new  
     points  
249 [ 1211] 2020-08-12T00:00:00Z | Adapted  
     (reason=scheduled) | elapsed=8.241s  
250 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
251     ✓ Incremental update on 25 new  
     points  
252 [ 1235] 2020-08-13T00:00:00Z | Adapted
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252 (reason=scheduled) | elapsed=10.756s
253 [Refit] Adapting SARIMA on 2161 hours
   (window=90d)
254     ✓ Incremental update on 25 new
       points
255 [ 1259] 2020-08-14T00:00:00Z | Adapted
   (reason=scheduled) | elapsed=8.136s
256 [Refit] Adapting SARIMA on 2161 hours
   (window=90d)
257     ✓ Incremental update on 25 new
       points
258 [ 1283] 2020-08-15T00:00:00Z | Adapted
   (reason=scheduled) | elapsed=10.290s
259 [Refit] Adapting SARIMA on 2161 hours
   (window=90d)
260     ✓ Incremental update on 25 new
       points
261 [ 1307] 2020-08-16T00:00:00Z | Adapted
   (reason=scheduled) | elapsed=10.174s
262 [Refit] Adapting SARIMA on 2161 hours
   (window=90d)
263     ✓ Incremental update on 25 new
       points
264 [ 1331] 2020-08-17T00:00:00Z | Adapted
   (reason=scheduled) | elapsed=10.010s
265 [Metrics] MASE: 2.0059, PI Coverage:
   0.8869
266 [Refit] Adapting SARIMA on 2161 hours
   (window=90d)
267     ✓ Incremental update on 25 new
       points
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268 [ 1355] 2020-08-18T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=10.604s
269   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
270     ✓ Incremental update on 25 new
      points
271 [ 1379] 2020-08-19T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=9.714s
272   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
273     ✓ Incremental update on 25 new
      points
274 [ 1403] 2020-08-20T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=9.452s
275   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
276     ✓ Incremental update on 25 new
      points
277 [ 1427] 2020-08-21T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=8.610s
278   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
279     ✓ Incremental update on 25 new
      points
280 [ 1451] 2020-08-22T00:00:00Z | Adapted
      (reason=scheduled) | elapsed=9.253s
281   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
282     ✓ Incremental update on 25 new
      points
283 [ 1475] 2020-08-23T00:00:00Z | Adapted
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283 (reason=scheduled) | elapsed=10.013s
284   [Refit] Adapting SARIMA on 2161 hours
   (window=90d)
285     ✓ Incremental update on 6 new
     points
286 [ 1480] 2020-08-23T05:00:00Z | Adapted
   (reason=drift) | elapsed=12.527s
287   [Refit] Adapting SARIMA on 2161 hours
   (window=90d)
288     ✓ Incremental update on 2 new
     points
289 [ 1481] 2020-08-23T06:00:00Z | Adapted
   (reason=drift) | elapsed=10.379s
290   [Refit] Adapting SARIMA on 2161 hours
   (window=90d)
291     ✓ Incremental update on 19 new
     points
292 [ 1499] 2020-08-24T00:00:00Z | Adapted
   (reason=scheduled) | elapsed=11.769s
293 [Progress] 1500/2000 hours completed
294   [Refit] Adapting SARIMA on 2161 hours
   (window=90d)
295     ✓ Incremental update on 11 new
     points
296 [ 1509] 2020-08-24T10:00:00Z | Adapted
   (reason=drift) | elapsed=9.783s
297   [Refit] Adapting SARIMA on 2161 hours
   (window=90d)
298     ✓ Incremental update on 2 new
     points
299 [ 1510] 2020-08-24T11:00:00Z | Adapted
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299 (reason=drift) | elapsed=10.380s
300 [Refit] Adapting SARIMA on 2161 hours
        (window=90d)
301     ✓ Incremental update on 2 new
        points
302 [ 1511] 2020-08-24T12:00:00Z | Adapted
        (reason=drift) | elapsed=10.701s
303 [Refit] Adapting SARIMA on 2161 hours
        (window=90d)
304     ✓ Incremental update on 2 new
        points
305 [ 1512] 2020-08-24T13:00:00Z | Adapted
        (reason=drift) | elapsed=10.780s
306 [Metrics] MASE: 2.1842, PI Coverage:
        0.8512
307 [Refit] Adapting SARIMA on 2161 hours
        (window=90d)
308     ✓ Incremental update on 2 new
        points
309 [ 1513] 2020-08-24T14:00:00Z | Adapted
        (reason=drift) | elapsed=10.212s
310 [Refit] Adapting SARIMA on 2161 hours
        (window=90d)
311     ✓ Incremental update on 2 new
        points
312 [ 1514] 2020-08-24T15:00:00Z | Adapted
        (reason=drift) | elapsed=8.783s
313 [Refit] Adapting SARIMA on 2161 hours
        (window=90d)
314     ✓ Incremental update on 2 new
        points
```

```
315 [ 1515] 2020-08-24T16:00:00Z | Adapted
      (reason=drift) | elapsed=9.953s
316   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
317     ✓ Incremental update on 2 new
      points
318 [ 1516] 2020-08-24T17:00:00Z | Adapted
      (reason=drift) | elapsed=10.642s
319   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
320     ✓ Incremental update on 2 new
      points
321 [ 1517] 2020-08-24T18:00:00Z | Adapted
      (reason=drift) | elapsed=9.716s
322   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
323     ✓ Incremental update on 2 new
      points
324 [ 1518] 2020-08-24T19:00:00Z | Adapted
      (reason=drift) | elapsed=10.739s
325   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
326     ✓ Incremental update on 2 new
      points
327 [ 1519] 2020-08-24T20:00:00Z | Adapted
      (reason=drift) | elapsed=10.893s
328   [Refit] Adapting SARIMA on 2161 hours
      (window=90d)
329     ✓ Incremental update on 2 new
      points
330 [ 1520] 2020-08-24T21:00:00Z | Adapted
```

```
330 (reason=drift) | elapsed=9.546s
331 [Refit] Adapting SARIMA on 2161 hours
        (window=90d)
332     ✓ Incremental update on 2 new
        points
333 [ 1521] 2020-08-24T22:00:00Z | Adapted
        (reason=drift) | elapsed=10.395s
334 [Refit] Adapting SARIMA on 2161 hours
        (window=90d)
335     ✓ Incremental update on 2 new
        points
336 [ 1522] 2020-08-24T23:00:00Z | Adapted
        (reason=drift) | elapsed=10.248s
337 [Refit] Adapting SARIMA on 2161 hours
        (window=90d)
338     ✓ Incremental update on 2 new
        points
339 [ 1523] 2020-08-25T00:00:00Z | Adapted
        (reason=scheduled) | elapsed=10.814s
340 [Refit] Adapting SARIMA on 2161 hours
        (window=90d)
341     ✓ Incremental update on 2 new
        points
342 [ 1524] 2020-08-25T01:00:00Z | Adapted
        (reason=drift) | elapsed=12.231s
343 [Refit] Adapting SARIMA on 2161 hours
        (window=90d)
344     ✓ Incremental update on 2 new
        points
345 [ 1525] 2020-08-25T02:00:00Z | Adapted
        (reason=drift) | elapsed=10.745s
```

```
346 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
347     ✓ Incremental update on 2 new  
points  
348 [ 1526] 2020-08-25T03:00:00Z | Adapted  
(reason=drift) | elapsed=11.461s  
349 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
350     ✓ Incremental update on 22 new  
points  
351 [ 1547] 2020-08-26T00:00:00Z | Adapted  
(reason=scheduled) | elapsed=10.595s  
352 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
353     ✓ Incremental update on 25 new  
points  
354 [ 1571] 2020-08-27T00:00:00Z | Adapted  
(reason=scheduled) | elapsed=13.195s  
355 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
356     ✓ Incremental update on 25 new  
points  
357 [ 1595] 2020-08-28T00:00:00Z | Adapted  
(reason=scheduled) | elapsed=13.338s  
358 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
359     ✓ Incremental update on 25 new  
points  
360 [ 1619] 2020-08-29T00:00:00Z | Adapted  
(reason=scheduled) | elapsed=13.094s  
361 [Refit] Adapting SARIMA on 2161 hours
```

```
361 (window=90d)
362     ✓ Incremental update on 25 new
points
363 [ 1643] 2020-08-30T00:00:00Z | Adapted
(reason=scheduled) | elapsed=11.353s
364 [Refit] Adapting SARIMA on 2161 hours
(window=90d)
365     ✓ Incremental update on 25 new
points
366 [ 1667] 2020-08-31T00:00:00Z | Adapted
(reason=scheduled) | elapsed=12.176s
367 [Metrics] MASE: 2.4036, PI Coverage:
0.7202
368 [Refit] Adapting SARIMA on 2161 hours
(window=90d)
369     ✓ Incremental update on 25 new
points
370 [ 1691] 2020-09-01T00:00:00Z | Adapted
(reason=scheduled) | elapsed=11.213s
371 [Refit] Adapting SARIMA on 2161 hours
(window=90d)
372     ✓ Incremental update on 25 new
points
373 [ 1715] 2020-09-02T00:00:00Z | Adapted
(reason=scheduled) | elapsed=11.277s
374 [Refit] Adapting SARIMA on 2161 hours
(window=90d)
375     ✓ Incremental update on 25 new
points
376 [ 1739] 2020-09-03T00:00:00Z | Adapted
(reason=scheduled) | elapsed=11.406s
```

```
377 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
378     ✓ Incremental update on 25 new  
points  
379 [ 1763] 2020-09-04T00:00:00Z | Adapted  
(reason=scheduled) | elapsed=12.432s  
380 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
381     ✓ Incremental update on 25 new  
points  
382 [ 1787] 2020-09-05T00:00:00Z | Adapted  
(reason=scheduled) | elapsed=11.743s  
383 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
384     ✓ Incremental update on 25 new  
points  
385 [ 1811] 2020-09-06T00:00:00Z | Adapted  
(reason=scheduled) | elapsed=14.139s  
386 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
387     ✓ Incremental update on 8 new  
points  
388 [ 1818] 2020-09-06T07:00:00Z | Adapted  
(reason=drift) | elapsed=14.050s  
389 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
390     ✓ Incremental update on 2 new  
points  
391 [ 1819] 2020-09-06T08:00:00Z | Adapted  
(reason=drift) | elapsed=8.282s  
392 [Refit] Adapting SARIMA on 2161 hours
```

```
392 (window=90d)
393     ✓ Incremental update on 17 new
points
394 [ 1835] 2020-09-07T00:00:00Z | Adapted
(reason=scheduled) | elapsed=10.180s
395 [Metrics] MASE: 2.2236, PI Coverage:
0.8095
396 [Refit] Adapting SARIMA on 2161 hours
(window=90d)
397     ✓ Incremental update on 25 new
points
398 [ 1859] 2020-09-08T00:00:00Z | Adapted
(reason=scheduled) | elapsed=11.692s
399 [Refit] Adapting SARIMA on 2161 hours
(window=90d)
400     ✓ Incremental update on 25 new
points
401 [ 1883] 2020-09-09T00:00:00Z | Adapted
(reason=scheduled) | elapsed=13.142s
402 [Refit] Adapting SARIMA on 2161 hours
(window=90d)
403     ✓ Incremental update on 25 new
points
404 [ 1907] 2020-09-10T00:00:00Z | Adapted
(reason=scheduled) | elapsed=12.127s
405 [Refit] Adapting SARIMA on 2161 hours
(window=90d)
406     ✓ Incremental update on 25 new
points
407 [ 1931] 2020-09-11T00:00:00Z | Adapted
(reason=scheduled) | elapsed=10.304s
```

```
408 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
409     ✓ Incremental update on 25 new  
     points  
410 [ 1955] 2020-09-12T00:00:00Z | Adapted  
     (reason=scheduled) | elapsed=13.725s  
411 [Refit] Adapting SARIMA on 2161 hours  
(window=90d)  
412     ✓ Incremental update on 25 new  
     points  
413 [ 1979] 2020-09-13T00:00:00Z | Adapted  
     (reason=scheduled) | elapsed=13.156s  
414 [Progress] 2000/2000 hours completed  
415  
416 Live simulation completed: 2000 hours,  
     129 adaptations logged  
417 Saved: ../outputs/FR_online_updates.csv  
418 Saved: ../outputs/FR_rolling7d_metrics.  
     csv  
419  
420 =====  
     =====  
421 Live Simulation Summary for FR  
422 =====  
     =====  
423 Total updates logged: 129  
424 Strategy used: rolling_sarima  
425  
426 Adaptation reasons:  
427     scheduled: 83  
428     drift: 45
```

```
429    initial: 1
430
431 Process finished with exit code 0
432
```