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1 /System/Volumes/Data/Users/liangwenlong/envs/ml_env
  /bin/python3.12 /Users/liangwenlong/study/bme/3/
  ml_usage/project/solutionv5.py
2 正在读取数据...
3 正在构建特征 (V5 - MAE Special)...
4   正在对以下列进行 Target Encoding: ['
  driver_name_and_id', 'vehicle_type', '
  vehicle_motortype', 'deviceuniquecode']
5 最终特征数: 66
6 开始训练 LightGBM (Objective='MAE')...
7 Training until validation scores don't improve for
  300 rounds
8 [1000]  valid_0's l1: 19.4596
9 [2000]  valid_0's l1: 19.2352
10 [3000]  valid_0's l1: 19.1324
11 [4000]  valid_0's l1: 19.075
12 [5000]  valid_0's l1: 19.036
13 [6000]  valid_0's l1: 18.9992
14 [7000]  valid_0's l1: 18.9816
15 [8000]  valid_0's l1: 18.9659
16 [9000]  valid_0's l1: 18.9556
17 [10000] valid_0's l1: 18.9452
18 Did not meet early stopping. Best iteration is:
19 [9933]  valid_0's l1: 18.9447
20 Fold 1 MAE: 18.9447
21 Training until validation scores don't improve for
  300 rounds
22 [1000]  valid_0's l1: 19.685
23 [2000]  valid_0's l1: 19.4977
24 [3000]  valid_0's l1: 19.4051
25 [4000]  valid_0's l1: 19.3507
26 [5000]  valid_0's l1: 19.3142
27 [6000]  valid_0's l1: 19.2868
28 [7000]  valid_0's l1: 19.2719
29 [8000]  valid_0's l1: 19.259
30 [9000]  valid_0's l1: 19.2378
31 [10000] valid_0's l1: 19.2298
32 Did not meet early stopping. Best iteration is:
33 [9942]  valid_0's l1: 19.2295
34 Fold 2 MAE: 19.2295
35 Training until validation scores don't improve for
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35 300 rounds
36 [1000] valid_0's l1: 19.7784
37 [2000] valid_0's l1: 19.5749
38 [3000] valid_0's l1: 19.4673
39 [4000] valid_0's l1: 19.4051
40 [5000] valid_0's l1: 19.3589
41 [6000] valid_0's l1: 19.3296
42 [7000] valid_0's l1: 19.3071
43 [8000] valid_0's l1: 19.2925
44 [9000] valid_0's l1: 19.2811
45 [10000] valid_0's l1: 19.2705
46 Did not meet early stopping. Best iteration is:
47 [9997] valid_0's l1: 19.2705
48 Fold 3 MAE: 19.2705
49 Training until validation scores don't improve for
   300 rounds
50 [1000] valid_0's l1: 19.6803
51 [2000] valid_0's l1: 19.4596
52 [3000] valid_0's l1: 19.3589
53 [4000] valid_0's l1: 19.3046
54 [5000] valid_0's l1: 19.263
55 [6000] valid_0's l1: 19.2335
56 [7000] valid_0's l1: 19.2116
57 [8000] valid_0's l1: 19.1916
58 [9000] valid_0's l1: 19.1839
59 [10000] valid_0's l1: 19.1736
60 Did not meet early stopping. Best iteration is:
61 [9976] valid_0's l1: 19.1735
62 Fold 4 MAE: 19.1735
63 Training until validation scores don't improve for
   300 rounds
64 [1000] valid_0's l1: 19.6713
65 [2000] valid_0's l1: 19.4719
66 [3000] valid_0's l1: 19.3751
67 [4000] valid_0's l1: 19.3206
68 [5000] valid_0's l1: 19.2885
69 [6000] valid_0's l1: 19.2608
70 [7000] valid_0's l1: 19.2447
71 [8000] valid_0's l1: 19.2295
72 [9000] valid_0's l1: 19.2178
73 [10000] valid_0's l1: 19.2082
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74 Did not meet early stopping. Best iteration is:
75 [9987] valid_0's l1: 19.208
76 Fold 5 MAE: 19.2080
77
78 =====
79     V5版本 (MAE目标) 平均 MAE: 19.1653
80 =====
81 提交文件已生成: submission_v5_mae_19.1653.csv
82
83 进程已结束, 退出代码为 0
84
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