

```
1 "C:\Users\My PC\AppData\Local\Programs\Python\Python36-32\
python.exe" D:/pfe/Projets/pfe/apprentissage_LIC.py
2
3
4
5 -----Decision Tree-----
6
7
8
9 dataset/MIM/taken/MIM_del.csv
10
11
12
13 count      2405
14 unique      2
15 top        True
16 freq       1642
17 Name: is_code_smell, dtype: object
18 [[247  0]
19  [ 0 475]]
20 the recall for this model is : 1.0
21 TP 475
22 TN 247
23 FP 0
24 FN 0
25
26 -----Classification Report
27 -----
28
29                precision    recall  f1-score   support
30
31   False           1.00        1.00        1.00         247
32   True            1.00        1.00        1.00         475
33
34  micro avg           1.00        1.00        1.00        722
35  macro avg           1.00        1.00        1.00        722
36  weighted avg        1.00        1.00        1.00        722
37
38 Precision = 1.0
39 Rappel= 1.0
40 F_Mesure= 1.0
41
42 -----Decision Tree-----
43
```

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44
45
46 dataset/MIM/taken/MIM_RandomUnderSampler.csv
47
48
49
50 count      1526
51 unique      2
52 top        True
53 freq        763
54 Name: is_code_smell, dtype: object
55 [[229    0]
56  [ 0 229]]
57 the recall for this model is : 1.0
58 TP 229
59 TN 229
60 FP 0
61 FN 0
62
63 -----Classification Report
64 -----
65
66                precision    recall  f1-score   support
67
68      False            1.00      1.00      1.00        229
69      True             1.00      1.00      1.00        229
70
71   micro avg           1.00      1.00      1.00        458
72   macro avg           1.00      1.00      1.00        458
73   weighted avg        1.00      1.00      1.00        458
74
75 Precision =  1.0
76 Rappel=  1.0
77 F_Mesure= 1.0
78
79 -----Random Forest-----
80
81
82
83 dataset/MIM/taken/MIM_del.csv
84
85
86
87 count      2405

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88 unique          2
89 top             True
90 freq            1642
91 Name: is_code_smell, dtype: object
92 [[237    0]
93  [ 0 485]]
94 the recall for this model is : 1.0
95 TP 485
96 TN 237
97 FP 0
98 FN 0
99
100 -----Classification Report
    -----
101                precision    recall  f1-score   support
102
103         False           1.00      1.00      1.00         237
104         True            1.00      1.00      1.00         485
105
106    micro avg           1.00      1.00      1.00         722
107    macro avg           1.00      1.00      1.00         722
108 weighted avg           1.00      1.00      1.00         722
109
110 Precision =  1.0
111 Rappel=  1.0
112 F_Mesure= 1.0
113
114
115
116 -----Random Forest-----
117
118
119
120 dataset/MIM/taken/MIM_RandomUnderSampler.csv
121
122
123
124 count            1526
125 unique           2
126 top             True
127 freq             763
128 Name: is_code_smell, dtype: object
129 [[224    0]
130  [ 0 234]]
131 the recall for this model is : 1.0

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```
132 TP 234
133 TN 224
134 FP 0
135 FN 0
136
137 -----Classification Report
    -----
138                precision    recall  f1-score   support
139
140             False         1.00      1.00      1.00         224
141             True          1.00      1.00      1.00         234
142
143    micro avg         1.00      1.00      1.00         458
144    macro avg         1.00      1.00      1.00         458
145 weighted avg         1.00      1.00      1.00         458
146
147 Precision =  1.0
148 Rappel=  1.0
149 F_Mesure= 1.0
150
151
152
153 -----Naive Bayes-----
154
155
156
157 dataset/MIM/taken/MIM_del.csv
158
159
160
161 count      2405
162 unique      2
163 top        True
164 freq      1642
165 Name: is_code_smell, dtype: object
166 [[233    0]
167  [  0 489]]
168 the recall for this model is : 1.0
169 TP 489
170 TN 233
171 FP 0
172 FN 0
173
174 -----Classification Report
    -----
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175                precision    recall  f1-score   support
176
177         False         1.00      1.00      1.00         233
178         True          1.00      1.00      1.00         489
179
180    micro avg         1.00      1.00      1.00         722
181    macro avg         1.00      1.00      1.00         722
182 weighted avg         1.00      1.00      1.00         722
183
184 Precision =  1.0
185 Rappel=  1.0
186 F_Mesure= 1.0
187
188
189
190 -----Naive Bayes-----
191
192
193
194 dataset/MIM/taken/MIM_RandomUnderSampler.csv
195
196
197
198 count      1526
199 unique        2
200 top         True
201 freq        763
202 Name: is_code_smell, dtype: object
203 [[228    0]
204  [ 0 230]]
205 the recall for this model is : 1.0
206 TP 230
207 TN 228
208 FP 0
209 FN 0
210
211 -----Classification Report
212 -----
213                precision    recall  f1-score   support
214
215         False         1.00      1.00      1.00         228
216         True          1.00      1.00      1.00         230
217
218    micro avg         1.00      1.00      1.00         458
219    macro avg         1.00      1.00      1.00         458

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219 weighted avg          1.00          1.00          1.00          458
220
221 Precision =  1.0
222 Rappel=  1.0
223 F_Mesure= 1.0
224
225
226
227 -----SVM-----
228
229
230
231 dataset/MIM/taken/MIM_del.csv
232
233
234
235 count      2405
236 unique      2
237 top        True
238 freq       1642
239 Name: is_code_smell, dtype: object
240 [[233    0]
241  [ 0 489]]
242 the recall for this model is : 1.0
243 TP 489
244 TN 233
245 FP 0
246 FN 0
247
248 -----Classification Report
249 -----
250
251                precision    recall  f1-score   support
252
253     False           1.00      1.00      1.00         233
254     True            1.00      1.00      1.00         489
255
256  micro avg           1.00      1.00      1.00         722
257  macro avg           1.00      1.00      1.00         722
258  weighted avg        1.00      1.00      1.00         722
259
260 Precision =  1.0
261 Rappel=  1.0
262 F_Mesure= 1.0

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263
264 -----SVM-----
265
266
267
268 dataset/MIM/taken/MIM_RandomUnderSampler.csv
269
270
271
272 count      1526
273 unique      2
274 top        True
275 freq       763
276 Name: is_code_smell, dtype: object
277 [[223    0]
278  [ 0 235]]
279 the recall for this model is : 1.0
280 TP 235
281 TN 223
282 FP 0
283 FN 0
284
285 -----Classification Report
286 -----
287
288                precision    recall  f1-score   support
289
290      False            1.00      1.00      1.00         223
291      True             1.00      1.00      1.00         235
292
293   micro avg           1.00      1.00      1.00         458
294   macro avg           1.00      1.00      1.00         458
295   weighted avg        1.00      1.00      1.00         458
296
297 Precision = 1.0
298 Rappel= 1.0
299 F_Mesure= 1.0
300
301 Process finished with exit code 0
302
```