

```
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 [[368    0]
19  [ 0 835]]
20 the recall for this model is : 1.0
21 TP 835
22 TN 368
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         368
32   True            1.00        1.00        1.00         835
33
34  micro avg           1.00        1.00        1.00        1203
35  macro avg           1.00        1.00        1.00        1203
36  weighted avg          1.00        1.00        1.00        1203
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 [[383    0]
56  [ 0 380]]
57 the recall for this model is : 1.0
58 TP 380
59 TN 383
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         383
69   True            1.00        1.00        1.00         380
70
71  micro avg           1.00        1.00        1.00         763
72  macro avg           1.00        1.00        1.00         763
73 weighted avg           1.00        1.00        1.00         763
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 [[380    0]
93  [  0 823]]
94 the recall for this model is : 1.0
95 TP 823
96 TN 380
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         380
104      True            1.00      1.00      1.00         823
105
106   micro avg           1.00      1.00      1.00        1203
107   macro avg           1.00      1.00      1.00        1203
108 weighted avg          1.00      1.00      1.00        1203
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 [[387    0]
130  [  0 376]]
131 the recall for this model is : 1.0

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132 TP 376
133 TN 387
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         387
141             True          1.00      1.00      1.00         376
142
143    micro avg         1.00      1.00      1.00         763
144    macro avg         1.00      1.00      1.00         763
145 weighted avg         1.00      1.00      1.00         763
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 [[393    0]
167  [ 0 810]]
168 the recall for this model is : 1.0
169 TP 810
170 TN 393
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         393
178         True            1.00      1.00      1.00         810
179
180    micro avg           1.00      1.00      1.00        1203
181    macro avg           1.00      1.00      1.00        1203
182 weighted avg           1.00      1.00      1.00        1203
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 [[379    0]
204  [ 0 384]]
205 the recall for this model is : 1.0
206 TP 384
207 TN 379
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         379
216         True            1.00      1.00      1.00         384
217
218    micro avg           1.00      1.00      1.00         763
219    macro avg           1.00      1.00      1.00         763

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219 weighted avg          1.00          1.00          1.00          763
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 [[392    0]
241  [  0 811]]
242 the recall for this model is : 1.0
243 TP 811
244 TN 392
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         392
254     True          1.00        1.00        1.00         811
255
256  micro avg         1.00        1.00        1.00        1203
257  macro avg         1.00        1.00        1.00        1203
258  weighted avg         1.00        1.00        1.00        1203
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 [[379    0]
278  [ 0 384]]
279 the recall for this model is : 1.0
280 TP 384
281 TN 379
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         379
291      True             1.00      1.00      1.00         384
292
293   micro avg           1.00      1.00      1.00         763
294   macro avg           1.00      1.00      1.00         763
295   weighted avg         1.00      1.00      1.00         763
296
297 Precision = 1.0
298 Rappel= 1.0
299 F_Mesure= 1.0
300
301 Process finished with exit code 0
302
```