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1 D:\OneDrive\TFG\TFG_Python\venv\Scripts\python.exe C:\
  Users\elias\AppData\Local\JetBrains\Toolbox\apps\PyCharm-P
  \ch-0\183.4284.139\helpers\pydev\pydevconsole.py --mode=
  client --port=55587
2
3 import sys; print('Python %s on %s' % (sys.version, sys.
  platform))
4 sys.path.extend(['D:\\OneDrive\\TFG\\TFG_Python', 'D:/
  OneDrive/TFG/TFG_Python'])
5
6 PyDev console: starting.
7
8 Python 3.6.7 (v3.6.7:6ec5cf24b7, Oct 20 2018, 13:35:33) [
  MSC v.1900 64 bit (AMD64)] on win32
9 >>> runfile('D:/OneDrive/TFG/TFG_Python/core/model.py',
  wdir='D:/OneDrive/TFG/TFG_Python/core')
10 Using TensorFlow backend.
11 >>> model_training()
12 ISBINARY: True
13 tipo
14 benign          2510
15 malignant       2510
16 premalignant    2510
17 dtype: int64
18 Valid gen: Img leidas= 0
19 Valid gen: Img leidas= 100
20 Valid gen: Img leidas= 200
21 Valid gen: Img leidas= 300
22 Valid gen: Img leidas= 400
23 Valid gen: Img leidas= 500
24 Valid gen: Img leidas= 600
25 Valid gen: Img leidas= 700
26 Valid gen: Img leidas= 800
27 Valid gen: Img leidas= 900
28 Valid gen: Img leidas= 1000
29 Valid gen: Img leidas= 1100
30 Valid gen: Img leidas= 1200
31 Creando modelo y compilandolo
32 2019-04-26 22:35:08.304409: I tensorflow/core/platform/
  cpu_feature_guard.cc:141] Your CPU supports instructions
  that this TensorFlow binary was not compiled to use: AVX2
33 2019-04-26 22:35:08.549218: I tensorflow/core/
  common_runtime/gpu/gpu_device.cc:1432] Found device 0 with
  properties:
34 name: GeForce GTX 1070 major: 6 minor: 1 memoryClockRate(
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34 GHz): 1.835
35 pciBusID: 0000:26:00.0
36 totalMemory: 8.00GiB freeMemory: 6.64GiB
37 2019-04-26 22:35:08.549383: I tensorflow/core/
  common_runtime/gpu/gpu_device.cc:1511] Adding visible gpu
  devices: 0
38 2019-04-26 22:35:11.256071: I tensorflow/core/
  common_runtime/gpu/gpu_device.cc:982] Device interconnect
  StreamExecutor with strength 1 edge matrix:
39 2019-04-26 22:35:11.256168: I tensorflow/core/
  common_runtime/gpu/gpu_device.cc:988]      0
40 2019-04-26 22:35:11.256220: I tensorflow/core/
  common_runtime/gpu/gpu_device.cc:1001] 0:   N
41 2019-04-26 22:35:11.256402: I tensorflow/core/
  common_runtime/gpu/gpu_device.cc:1115] Created TensorFlow
  device (/job:localhost/replica:0/task:0/device:GPU:0 with
  6397 MB memory) -> physical GPU (device: 0, name: GeForce
  GTX 1070, pci bus id: 0000:26:00.0, compute capability: 6.
  1)
42 Se comienza el entrenamiento del modelo
43 ['loss', 'acc']
44 Epoch 1/40
45 2019-04-26 22:36:34.951741: W tensorflow/core/
  common_runtime/bfc_allocator.cc:211] Allocator (GPU_0_bfc
  ) ran out of memory trying to allocate 2.03GiB. The caller
  indicates that this is not a failure, but may mean that
  there could be performance gains if more memory were
  available.
46 2019-04-26 22:36:35.066423: W tensorflow/core/
  common_runtime/bfc_allocator.cc:211] Allocator (GPU_0_bfc
  ) ran out of memory trying to allocate 2.00GiB. The caller
  indicates that this is not a failure, but may mean that
  there could be performance gains if more memory were
  available.
47 2019-04-26 22:36:35.069393: W tensorflow/core/
  common_runtime/bfc_allocator.cc:211] Allocator (GPU_0_bfc
  ) ran out of memory trying to allocate 2.15GiB. The caller
  indicates that this is not a failure, but may mean that
  there could be performance gains if more memory were
  available.
48 - 89s - loss: 0.7692 - acc: 0.6812 - val_loss: 4.8543 -
  val_acc: 0.5826
49 Epoch 2/40
50 - 76s - loss: 0.5323 - acc: 0.7708 - val_loss: 3.0721 -
  val_acc: 0.6714
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51 Epoch 3/40
52   - 81s - loss: 0.5085 - acc: 0.7823 - val_loss: 1.4769 -
   val_acc: 0.7129
53 Epoch 4/40
54   - 70s - loss: 0.4800 - acc: 0.7865 - val_loss: 1.1892 -
   val_acc: 0.7734
55 Epoch 5/40
56   - 63s - loss: 0.4739 - acc: 0.8062 - val_loss: 0.5923 -
   val_acc: 0.7485
57 Epoch 6/40
58   - 63s - loss: 0.4422 - acc: 0.8062 - val_loss: 0.4938 -
   val_acc: 0.7925
59 Epoch 7/40
60   - 64s - loss: 0.4179 - acc: 0.8073 - val_loss: 0.5185 -
   val_acc: 0.7776
61 Epoch 8/40
62   - 66s - loss: 0.3978 - acc: 0.8250 - val_loss: 0.4347 -
   val_acc: 0.8183
63 Epoch 9/40
64   - 55s - loss: 0.3564 - acc: 0.8479 - val_loss: 0.4968 -
   val_acc: 0.7826
65 Epoch 10/40
66   - 61s - loss: 0.4005 - acc: 0.8219 - val_loss: 0.4676 -
   val_acc: 0.7842
67 Epoch 11/40
68   - 68s - loss: 0.3546 - acc: 0.8448 - val_loss: 0.4422 -
   val_acc: 0.8017
69 Epoch 12/40
70   - 52s - loss: 0.3579 - acc: 0.8438 - val_loss: 0.6749 -
   val_acc: 0.7203
71 Epoch 13/40
72   - 59s - loss: 0.4056 - acc: 0.8125 - val_loss: 0.5714 -
   val_acc: 0.7203
73
74 Epoch 00013: ReduceLROnPlateau reducing learning rate to 0
   .00049999999888241291.
75 Epoch 14/40
76   - 62s - loss: 0.3496 - acc: 0.8562 - val_loss: 0.4230 -
   val_acc: 0.8141
77 Epoch 15/40
78   - 58s - loss: 0.3193 - acc: 0.8750 - val_loss: 0.3647 -
   val_acc: 0.8266
79 Epoch 16/40
80   - 66s - loss: 0.3173 - acc: 0.8615 - val_loss: 0.3606 -
   val_acc: 0.8224
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81 Epoch 17/40
82   - 71s - loss: 0.3078 - acc: 0.8646 - val_loss: 0.3583 -
    val_acc: 0.8299
83 Epoch 18/40
84   - 63s - loss: 0.2853 - acc: 0.8813 - val_loss: 0.3489 -
    val_acc: 0.8415
85 Epoch 19/40
86   - 61s - loss: 0.2913 - acc: 0.8719 - val_loss: 0.3388 -
    val_acc: 0.8465
87 Epoch 20/40
88   - 86s - loss: 0.2787 - acc: 0.8854 - val_loss: 0.3676 -
    val_acc: 0.8174
89 Epoch 21/40
90   - 210s - loss: 0.2773 - acc: 0.8875 - val_loss: 0.3990
    - val_acc: 0.8108
91 Epoch 22/40
92   - 251s - loss: 0.2448 - acc: 0.9073 - val_loss: 0.3496
    - val_acc: 0.8398
93 Epoch 23/40
94   - 190s - loss: 0.2822 - acc: 0.8948 - val_loss: 0.3563
    - val_acc: 0.8299
95 Epoch 24/40
96   - 61s - loss: 0.2260 - acc: 0.9073 - val_loss: 0.3625 -
    val_acc: 0.8432
97
98 Epoch 00024: ReduceLROnPlateau reducing learning rate to
    4.9999996554106475e-05.
99 Epoch 25/40
100  - 76s - loss: 0.2602 - acc: 0.8875 - val_loss: 0.3563 -
    val_acc: 0.8423
101 Epoch 26/40
102  - 71s - loss: 0.2519 - acc: 0.8979 - val_loss: 0.3425 -
    val_acc: 0.8473
103 Epoch 27/40
104  - 78s - loss: 0.2570 - acc: 0.8969 - val_loss: 0.3390 -
    val_acc: 0.8490
105 Epoch 28/40
106  - 65s - loss: 0.2237 - acc: 0.9104 - val_loss: 0.3369 -
    val_acc: 0.8432
107 Epoch 29/40
108  - 61s - loss: 0.2397 - acc: 0.9031 - val_loss: 0.3371 -
    val_acc: 0.8490
109 Epoch 30/40
110  - 58s - loss: 0.2241 - acc: 0.9156 - val_loss: 0.3363 -
    val_acc: 0.8506
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111 Epoch 31/40
112   - 64s - loss: 0.2899 - acc: 0.8917 - val_loss: 0.3354 -
    val_acc: 0.8498
113 Epoch 32/40
114   - 62s - loss: 0.2128 - acc: 0.9177 - val_loss: 0.3318 -
    val_acc: 0.8490
115 Epoch 33/40
116   - 68s - loss: 0.2434 - acc: 0.9021 - val_loss: 0.3323 -
    val_acc: 0.8415
117 Epoch 34/40
118   - 59s - loss: 0.2487 - acc: 0.9073 - val_loss: 0.3306 -
    val_acc: 0.8473
119 Epoch 35/40
120   - 66s - loss: 0.2485 - acc: 0.9073 - val_loss: 0.3321 -
    val_acc: 0.8465
121 Epoch 36/40
122   - 66s - loss: 0.2459 - acc: 0.8969 - val_loss: 0.3317 -
    val_acc: 0.8473
123 Epoch 37/40
124   - 69s - loss: 0.2210 - acc: 0.9052 - val_loss: 0.3389 -
    val_acc: 0.8564
125 Epoch 38/40
126   - 59s - loss: 0.2101 - acc: 0.9208 - val_loss: 0.3387 -
    val_acc: 0.8548
127 Epoch 39/40
128   - 58s - loss: 0.2545 - acc: 0.8927 - val_loss: 0.3404 -
    val_acc: 0.8473
129
130 Epoch 00039: ReduceLROnPlateau reducing learning rate to
    4.999999509891496e-06.
131 Epoch 40/40
132   - 59s - loss: 0.2211 - acc: 0.9208 - val_loss: 0.3374 -
    val_acc: 0.8523
133 Entrenamiento completado, se procede al test final
134
135   32/1506 [.....] - ETA: 11s
136   64/1506 [>.....] - ETA: 11s
137   96/1506 [>.....] - ETA: 10s
138  128/1506 [=>.....] - ETA: 10s
139  160/1506 [==>.....] - ETA: 9s
140  192/1506 [==>.....] - ETA: 9s
141  224/1506 [===>.....] - ETA: 9s
142  256/1506 [===>.....] - ETA: 8s
143  288/1506 [===>.....] - ETA: 8s
144  320/1506 [===>.....] - ETA: 8s
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145 352/1506 [=====>.....] - ETA: 7s
146 384/1506 [=====>.....] - ETA: 7s
147 416/1506 [=====>.....] - ETA: 7s
148 448/1506 [=====>.....] - ETA: 7s
149 480/1506 [=====>.....] - ETA: 7s
150 512/1506 [=====>.....] - ETA: 6s
151 544/1506 [=====>.....] - ETA: 6s
152 576/1506 [=====>.....] - ETA: 6s
153 608/1506 [=====>.....] - ETA: 6s
154 640/1506 [=====>.....] - ETA: 5s
155 672/1506 [=====>.....] - ETA: 5s
156 704/1506 [=====>.....] - ETA: 5s
157 736/1506 [=====>.....] - ETA: 5s
158 768/1506 [=====>.....] - ETA: 5s
159 800/1506 [=====>.....] - ETA: 4s
160 832/1506 [=====>.....] - ETA: 4s
161 864/1506 [=====>.....] - ETA: 4s
162 896/1506 [=====>.....] - ETA: 4s
163 928/1506 [=====>.....] - ETA: 3s
164 960/1506 [=====>.....] - ETA: 3s
165 992/1506 [=====>.....] - ETA: 3s
166 1024/1506 [=====>.....] - ETA: 3s
167 1056/1506 [=====>.....] - ETA: 3s
168 1088/1506 [=====>.....] - ETA: 2s
169 1120/1506 [=====>.....] - ETA: 2s
170 1152/1506 [=====>.....] - ETA: 2s
171 1184/1506 [=====>.....] - ETA: 2s
172 1216/1506 [=====>.....] - ETA: 1s
173 1248/1506 [=====>.....] - ETA: 1s
174 1280/1506 [=====>.....] - ETA: 1s
175 1312/1506 [=====>.....] - ETA: 1s
176 1344/1506 [=====>.....] - ETA: 1s
177 1376/1506 [=====>...] - ETA: 0s
178 1408/1506 [=====>..] - ETA: 0s
179 1440/1506 [=====>..] - ETA: 0s
180 1472/1506 [=====>.] - ETA: 0s
181 1504/1506 [=====>.] - ETA: 0s
182 1506/1506 [=====] - 11s 7ms/step
183 ['loss', 'acc']
184 [0.3392137618980322, 0.8585657370517928]
185 Ahora vamos a dibujar la matriz de confusion
186 ['benign', 'pre malignant', 'malignant']
187 Normalized confusion matrix
188 [[0.79918033 0.18237705 0.01844262]
189 [0.19535783 0.79110251 0.01353965]]

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190 [0.00998004 0.00399202 0.98602794]]  
191 El entrenamiento ha llevado : 3474.9091227054596  
192
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