Log Book

20/07:
I have coded a K-Fold Cross Validation to take all the models with 1 Dense & 2 conv2D layers with f1>0.98 and do cross-validation training without any special counter-overfitting method for DL models. I ran it during the night. But, the code works well, I tried with epochs = 1 and an excel tab was saved and readable.

21/07:
I just remembered, it could be interesting to have a standard deviation of the F1-Score so I added a new column. I ran the code with Data Augmentation (mirroring) while listening to the presentation of Quividi by Olivier this morning. I also ran it without Data Augmentation.

22/07:
I just came to the office and I intended a presentation of Olivier during the morning and in the afternoon, I have worked on Python OOP and I wrote the code to take 5 most performing model and add anti-overfitting techniques (early stopping, dropouts)

23/07:
I have added a batch normalization option and I ran the code to study the impact of dropout layers and early stopping (with no batch normalization or regularization). I started learning OOP.

24/07:
I came to the office to install vidireports on a NUC given by Olivier, I have ran the code with batch normalization to study the impact of batch normalization on the models. I have studied log sessions and graphs in Tensorflow to understand more how it works back end.

27/07:
I have added a regularization option and I ran again batch normalization because I didn't have time at the office to let the code run completely Friday. Also, I have checked digital image processing techniques given by Enrico (no success, very few resources)

28/07:

I have compared with/without batch normalization and started a report to put figures in. I run a new version of the code (anti_overfit_5_best.py) where I put into account regularization

29/07:
I did the analysis of all the anti-overfitting techniques so far and dug for more ideas to test (blurring images). Also, I did some OOP exercises.

30/07:
I made a code to have confusion matrix + flops for a model on a test set

31/07:
I computed these for many cases and started the report. Also, I ended the day with some OOP exercises.

03/08:
I implemented a class to get subplots of different filters applied to an image. I studied many derivative or threshold filters of opencv.

04/08:
I pitched all my ideas & results to Enrico. We worked together on getting an efficient model. JACKPOT ! 3k flop and 96% score on test

05/08 & 06/08:
I started tutorials on Transfer Learning and I saved much more data to compare my results for the report.

07/08:
I used MobileNet V2 but had no success on my computer. I tried a notebook on colab, I have results.

10/08 & 11/08:
I was a 100% on the report. I used http://alexlenail.me/NN-SVG/LeNet.html to draw architecture and Powerpoint to draw simplified architectures.

12/08:
I made the appendix and I rewrote many things in the report and tried to make it much easier to read. Sent to Heads & Enrico.

13/08:
I checked my codes to make them clearer