

Utilisation du script de variation d'architectures avec approche naive

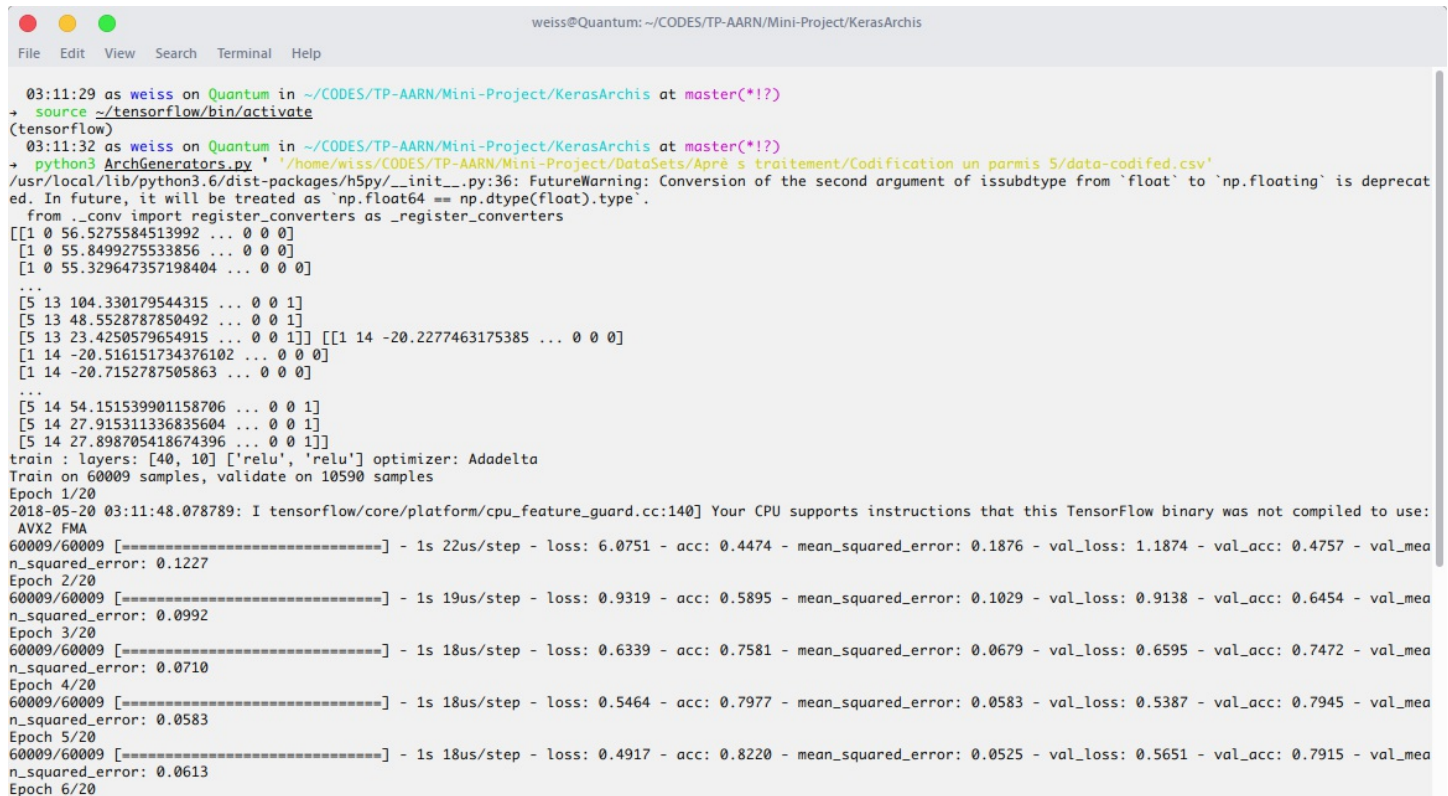
Il faut d'abord lancer l'environnement virtuel avec la commande

```
source pathToVirtualEnv/bin/activate
```

puis lancer le script avec la commande

```
python3 ArchGenerators.py codifiedTraining.csv
```

comme montré dans l'illustration suivante



```
weiss@Quantum: ~/CODES/TP-AARN/Mini-Project/KerasArchis
File Edit View Search Terminal Help
03:11:29 as weiss on Quantum in ~/CODES/TP-AARN/Mini-Project/KerasArchis at master(*!?)
+ source ~/tensorflow/bin/activate
(tensorflow)
03:11:32 as weiss on Quantum in ~/CODES/TP-AARN/Mini-Project/KerasArchis at master(*!?)
+ python3 ArchGenerators.py ' /home/weiss/CODES/TP-AARN/Mini-Project/DataSets/Après s traitement/Codification un parmis 5/data-codified.csv'
/usr/local/lib/python3.6/dist-packages/h5py/__init__.py:36: FutureWarning: Conversion of the second argument of 'issubdtype' from `float` to `np.floating` is deprecated. In future, it will be treated as `np.float64 == np.dtype(float).type`.
  from ..conv import register_converters as _register_converters
[[1 0 56.5275584513992 ... 0 0 0]
 [1 0 55.8499275533856 ... 0 0 0]
 [1 0 55.329647357198404 ... 0 0 0]
...
 [5 13 104.330179544315 ... 0 0 1]
 [5 13 48.5528787850492 ... 0 0 1]
 [5 13 23.4250579654915 ... 0 0 1]] [[1 14 -20.2277463175385 ... 0 0 0]
 [1 14 -20.516151734376102 ... 0 0 0]
 [1 14 -20.7152787505863 ... 0 0 0]
...
 [5 14 54.151539901158706 ... 0 0 1]
 [5 14 27.915311336835604 ... 0 0 1]
 [5 14 27.898705418674396 ... 0 0 1]]
train : layers: [40, 10] ['relu', 'relu'] optimizer: Adadelta
Train on 60009 samples, validate on 10590 samples
Epoch 1/20
2018-05-20 03:11:48.078789: I tensorflow/core/platform/cpu_feature_guard.cc:140] Your CPU supports instructions that this TensorFlow binary was not compiled to use:
AVX2 FMA
60009/60009 [=====] - 1s 22us/step - loss: 6.0751 - acc: 0.4474 - mean_squared_error: 0.1876 - val_loss: 1.1874 - val_acc: 0.4757 - val_mea
n_squared_error: 0.1227
Epoch 2/20
60009/60009 [=====] - 1s 19us/step - loss: 0.9319 - acc: 0.5895 - mean_squared_error: 0.1029 - val_loss: 0.9138 - val_acc: 0.6454 - val_mea
n_squared_error: 0.0992
Epoch 3/20
60009/60009 [=====] - 1s 18us/step - loss: 0.6339 - acc: 0.7581 - mean_squared_error: 0.0679 - val_loss: 0.6595 - val_acc: 0.7472 - val_mea
n_squared_error: 0.0710
Epoch 4/20
60009/60009 [=====] - 1s 18us/step - loss: 0.5464 - acc: 0.7977 - mean_squared_error: 0.0583 - val_loss: 0.5387 - val_acc: 0.7945 - val_mea
n_squared_error: 0.0583
Epoch 5/20
60009/60009 [=====] - 1s 18us/step - loss: 0.4917 - acc: 0.8220 - mean_squared_error: 0.0525 - val_loss: 0.5651 - val_acc: 0.7915 - val_mea
n_squared_error: 0.0613
Epoch 6/20
```

Les architectures et graphs seront sauvegardé comme suit :

```
weiss@Quantum: ~/CODES/TP-AARN/Mini-Project/KerasArchis
File Edit View Search Terminal Help
(tensorflow)
03:12:59 as weiss on Quantum in ~/CODES/TP-AARN/Mini-Project/KerasArchis at master(*!?)
+ tree
.
├── ArchGeneratorsClustering.py
├── ArchGenerators.py
├── comment-utiliser-ArchGeneratorlustering.pdf
├── Graphs
│   ├── bestModel.png
│   ├── model : layers: [40, 10] ['relu', 'relu'] optimizer: Adadelata.png
│   ├── model : layers: [40, 10] ['relu', 'relu'] optimizer: Adagrad.png
│   ├── model : layers: [40, 10] ['relu', 'relu'] optimizer: Adamax.png
│   ├── model : layers: [40, 10] ['relu', 'relu'] optimizer: Adam.png
│   ├── model : layers: [40, 10] ['relu', 'relu'] optimizer: Nadam.png
│   ├── model : layers: [40, 10] ['relu', 'relu'] optimizer: RMSprop.png
│   ├── model : layers: [40, 10] ['relu', 'relu'] optimizer: SGD.png
│   ├── model : layers: [40, 20] ['relu', 'relu'] optimizer: Adadelata.png
│   ├── model : layers: [40, 20] ['relu', 'relu'] optimizer: Adagrad.png
│   ├── model : layers: [40, 20] ['relu', 'relu'] optimizer: Adamax.png
│   ├── model : layers: [40, 20] ['relu', 'relu'] optimizer: Adam.png
│   ├── model : layers: [40, 20] ['relu', 'relu'] optimizer: RMSprop.png
│   └── model : layers: [40, 20] ['relu', 'relu'] optimizer: SGD.png
├── Logs
│   └── modeltraining.log
├── Models
│   ├── JSON
│   │   └── modelEvCluster_Architecture.json
│   └── Weights
│       └── bestEvModelCluster.hd5
├── __pycache__
│   └── variator.cpython-36.pyc
└── variator.py

6 directories, 22 files
(tensorflow)
03:13:01 as weiss on Quantum in ~/CODES/TP-AARN/Mini-Project/KerasArchis at master(*!?)
+ |
```