# pig_params_cloudera_correction

July 1, 2023

# 1 PIG et Paramètres (Cloudera) (correction)

Correction.

[1]:
```
from jyquickhelper import add_notebook_menu
add_notebook_menu()
```

[1]:
```
<IPython.core.display.HTML object>
```

## 1.1 Connexion au cluster

On prend le cluster Cloudera. Il faut exécuter ce script pour pouvoir notifier au notebook que la variable `params` existe.

[2]:
```
import pyensae
from pyquickhelper.ipythonhelper import open_html_form
params={"server":"df...fr", "username":"", "password":""}
open_html_form(params=params,title="server + credentials", key_save="params")
```

[2]:
```
<IPython.core.display.HTML at 0x70af190>
```

[3]:
```
import pyensae
%load_ext pyensae
%load_ext pyenbc
password = params["password"]
server = params["server"]
username = params["username"]
client = %remote_open
client
```

[3]:
```
<pyensae.remote.ssh_remote_connection.ASSHClient at 0x9e20910>
```

## 1.2 Exercice 1 : min, max

On ajoute deux paramètres pour construire l'histogramme entre deux valeurs `a`,`b`. Ajouter ces deux paramètres au nom du fichier de sortie peut paraître raisonnable mais l'interpréteur a du mal à identifier les paramètres `Undefined parameter : bins_`. On utilise des tirets.

[4]:
```
%%PIG histogramab.pig

values = LOAD 'random/random.sample.txt' USING PigStorage('\t') AS (x:double);
```

```
values_f = FILTER values BY x >= $a AND x <= $b ;   -- ligne ajoutée

values_h = FOREACH values_f GENERATE x, ((int)(x / $bins)) * $bins AS h ;

hist_group = GROUP values_h BY h ;

hist = FOREACH hist_group GENERATE group, COUNT(values_h) AS nb ;

STORE hist INTO 'random/histo_$bins-$a-$b.txt' USING PigStorage('\t') ;
```

[5]:
```
if client.dfs_exists("random/histo_0.1-0.2-0.8.txt"):
    client.dfs_rm("random/histo_0.1-0.2-0.8.txt", recursive=True)
```

[6]:
```
client.pig_submit("histogramab.pig", redirection="redirection",
                  params =dict(bins="0.1", a="0.2", b="0.8") )
```

[6]:
```
('', '')
```

[7]:
```
%remote_cmd tail redirection.err
```

[7]:
```
<IPython.core.display.HTML at 0xa076c10>
```

[8]:
```
%dfs_ls random
```

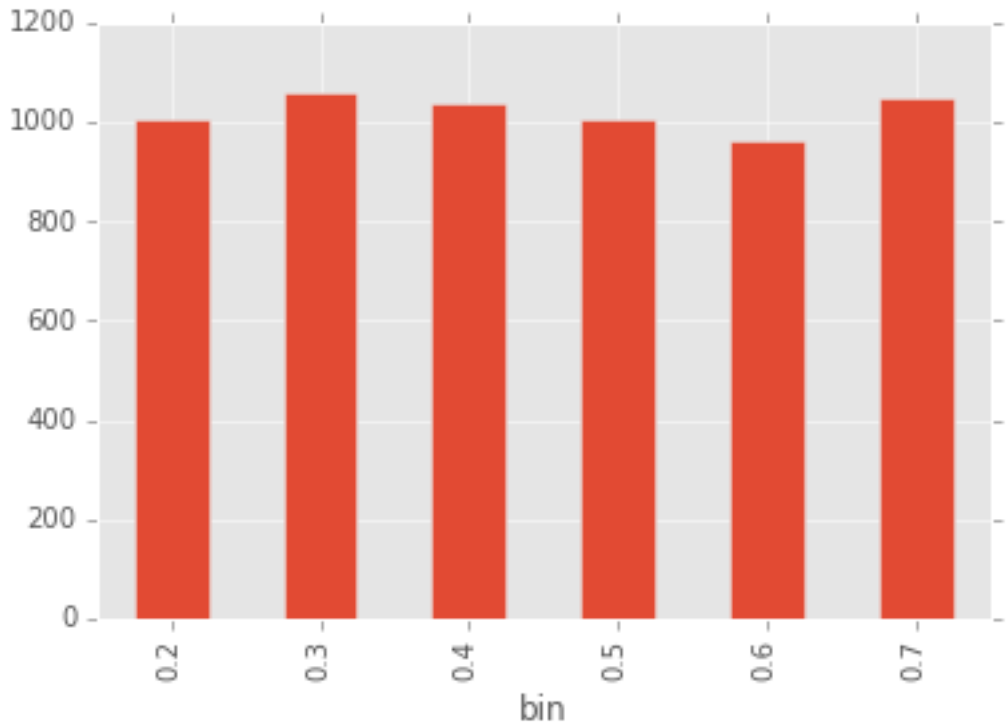
[8]:
```
   attributes code        alias       folder    size        date   time  \
0  drwxr-xr-x    -  xavierdupre  xavierdupre       0  2014-12-03  22:55
1  drwxr-xr-x    -  xavierdupre  xavierdupre       0  2014-11-28  00:11
2  -rw-r--r--    3  xavierdupre  xavierdupre  202586  2014-11-27  23:38

                           name  isdir
0  random/histo_0.1-0.2-0.8.txt   True
1          random/histo_0.1.txt   True
2      random/random.sample.txt  False
```

[9]:
```
if os.path.exists("histo.txt") : os.remove("histo.txt")
client.download_cluster("random/histo_0.1-0.2-0.8.txt","histo.txt", merge=True)
```

[9]:
```
'random/histo_0.1-0.2-0.8.txt'
```

[10]:
```
import matplotlib.pyplot as plt
plt.style.use('ggplot')
import pandas
df = pandas.read_csv("histo.txt", sep="\t",names=["bin","nb"])
df.plot(x="bin",y="nb",kind="bar")
```

[10]:
```
<matplotlib.axes._subplots.AxesSubplot at 0xa0c5c70>
```




[11]: