

```
In [1]: import sys,os
sys.path.insert(1, os.path.join(sys.path[0], '..'))
from IPython_generator import IPythonNotebookGenerator
current_path = '../dataset/MS 2 GitHub data part 4/syd 2'
path_ext = os.path.split(current_path)[1]
current_path = os.path.abspath(current_path)
print 'data path (abs) : ', current_path
res_folder = os.path.join('.',path_ext)
res_folder = os.path.abspath(res_folder)
print 'res_folder path (abs output) : ', res_folder
prev_path='../home/xsong/coliSurvivalAnalysis/xsong/Microfluidics Database/'
prev_path = os.path.abspath(prev_path)
print "prev_path (abs) : ", prev_path
python_class_path = "../"
python_class_path = os.path.abspath(python_class_path)
print "python class path (abs) : ", python_class_path
alcohol_time = "105"
cutoff="CheckReplication.cutoff31"
cutoff="-1"

use_mg_wt = True
if use_mg_wt:
    MG_WT_path = '../dataset/MG-WT'
    MG_WT_path = os.path.abspath(MG_WT_path)

data path (abs) : /home/xsong/mg-wt/dataset/MS 2 GitHub data part 4/syd 2
res_folder path (abs output) : /home/xsong/mg-wt/demo/syd 2
prev_path (abs) : /home/xsong/coliSurvivalAnalysis/xsong/Microfluidics Database
python class path (abs) : /home/xsong/mg-wt
```

Preprocessing, check file duplication, generate new list

```
In [2]: #---Demo---Preprocessing auto generator and execution, modify the generated
#Verify inside the code, the good paths are set for the current dataset and
oPath = os.path.join(res_folder,'run-PRE')
filter_file_path = '../Users/songxiaohu/Desktop/githubYfan/PIMortalityAnaly
selfFilter = 'True'
IPythonNotebookGenerator.run_PRE(python_class_path,oPath, current_path,prev_

In [3]: IPythonNotebookGenerator.execute(oPath)

---Execute ipython code---
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-PRE/Preprocessing.ipynb
```

.tab files in replicate group in finalFiles.txt TAB Analyzer

```
In [4]: #---Demo--- TAB processing auto generator and execution
#data_path = '/Users/songxiaohu/Desktop/githubYfan/PI Mortality Analysis/xsong
filter_path = os.path.join(current_path+'/ '+'report', 'finalFiles.txt')#'/Us
oPath = os.path.join(res_folder, 'run-TAB')
nbGenerator = IPythonNotebookGenerator(filterPath=filter_path, outputPath=oPa
#fFn_parent_path for non relative path in the filter file path
fFn_parent_path=current_path#'/Users/songxiaohu/Desktop/githubYfan/PI Mortal
nbGenerator.run_TAB_PIP(python_class_path, alcohol_time, fFn_parent_path)
```

Initialization of Ipython auto generator

---Ipython code generation process---

```
/home/xsong/mg-wt/demo/syd 2/run-TAB/WT-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/abgR-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/aceF-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/agaR-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/agaV_new-1.ipynb
remove file : /home/xsong/coliSurvivalAnalysis/xsong/Microfluidics Databa
se/alsB/TA_alsB-1_colomap_by_files.png
/home/xsong/mg-wt/demo/syd 2/run-TAB/alsB-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/appY-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/aqpZ-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/ascG-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/barA_new-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/bipA-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/brnQ_new-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/caiT-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/caiT_new-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/crcA-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/cynX-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/dnaT_new-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/eptB-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/fepG-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/fkpA-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/hchA-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/hns-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/kdpF_new-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/lipA-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/lipB-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/lpd-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/moaE-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/ompL_new-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/pfkA-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/pgi-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/pnp-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/pspB-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/ptsH-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/puuB-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/recF-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/rsxC-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/sspA-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/thiQ_new-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/treC-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/unidentified-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/uxaB_new-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/wcaM_new-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/yafX-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/yagS-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/ycaL-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/ychF-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/ydcY-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/yecI-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/yecP-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/yehY-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/yfiD_new-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/yggJ-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/yigL-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/yihS_new-1.ipynb
/home/xsong/mg-wt/demo/syd 2/run-TAB/yjeB-1.ipynb
```

In [5]: IPythonNotebookGenerator.execute(oPath)

```

---Execute ipython code---
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/alsB-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/yecP-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/hchA-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/bipA-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/fepG-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/crcA-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/yjhG-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/ytfH_new-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/yjeB-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/ydcY-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/cynX-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/yjgH-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/wcaM_new-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/eptB-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/caiT_new-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/dnaT_new-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/yecI-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/caiT-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/yagS-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/yfiD_new-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/puuB-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/yehY-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/barA_new-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/WT-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/treC-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/lipA-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/abgR-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/ptsH-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/fkpA-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/ycaL-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/brnQ_new-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/yafX-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/appY-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/yigL-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/aqpZ-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/ascG-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/unidentified-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/recF-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/moaE-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/ykff-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/hns-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/sspA-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/pnp-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/yihS_new-1.ipynb
--Execute-- /home/xsong/mg-wt/demo/syd 2/run-TAB/syd 2-1.ipynb

-----
-
CalledProcessError                                Traceback (most recent call last)
)
<ipython-input-5-765ee562b514> in <module>()
----> 1 IPythonNotebookGenerator.execute(oPath)

/home/xsong/mg-wt/IPython_generator.py in execute(folder_path, filterName
s)
    352
    353         paths = IPythonNotebookGenerator.listFilesFromFolder(folde
r_path)
--> 354         IPythonNotebookGenerator.callPython(paths,filterNames)
    355
    356         @staticmethod

/home/xsong/mg-wt/IPython_generator.py in callPython(paths, filterList)
    574         for p in path_filtered:
    575             print "--Execute-- ",p
    576             ...

```

generate Mortality Distribution ipython file, modify the input in the file

```
In [ ]: oPath = os.path.join(res_folder, 'run-MD')
data_folder_path = current_path#'/Users/songxiaohu/Desktop/githubYfan/PIMor
if use_mg_wt:
    ref_df_path = os.path.join(MG_WT_path, 'MG_WT_CLUSTER_0_df_relative_timeg
else:
    ref_df_path = os.path.join(prev_path, 'WT/WT-1_df_relative_timegrid.pickle
print ref_df_path
IPythonNotebookGenerator.run_MD(python_class_path, oPath, data_folder_path, re

In [ ]: IPythonNotebookGenerator.execute(oPath)
```

Check Replication

```
In [ ]: oPath = os.path.join(res_folder, 'run-CR')
folderPath = current_path
if use_mg_wt:
    path_ref_folder = os.path.split(MG_WT_path)[0]
else:
    path_ref_folder = os.path.join(prev_path, 'WT')
IPythonNotebookGenerator.run_CR(python_class_path, oPath, folderPath, path_ref

In [ ]: IPythonNotebookGenerator.execute(oPath)
```

GG GGM Selector

```
In [ ]: oPath = os.path.join(res_folder, 'run-SELECTOR')
data_folder_path = current_path
IPythonNotebookGenerator.run_SELECTOR(python_class_path, oPath, data_folder_path, re

In [ ]: IPythonNotebookGenerator.execute(oPath)

In [ ]:

In [ ]:
```