

Excel File Processing

by Jibo He

清华大学社会科学学院心理学系

hejibolaboratory@pku.org.cn

Python Modules for Excel Processing

Xlrd

reading data and formatting from .xls files

- <http://pypi.python.org/pypi/xlrd>

Xlwt

writing data and formatting to .xls files

<https://pypi.python.org/pypi/xlwt>

xlutils

<http://pypi.python.org/pypi/xlutils>

- a collection of utilities using both xlrd and xlwt:
- copying data from a source to a target spreadsheet
- filtering data from a source to a target spreadsheet

Python Modules for Excel Processing

XlsxWriter

<https://xlsxwriter.readthedocs.org/>

XlsxWriter is a Python module that can be used to write text, numbers, formulas and hyperlinks to multiple worksheets in an Excel 2007+ XLSX file. It supports features such as formatting and many more, including:

Install Python packages (1)

Install using .exe

xlrd-0.7.1.win32.exe

<https://pypi.python.org/pypi/xlrd/0.7.1>

Install from source:

```
C:> cd xlrd-0.7.1
```

```
C:\xlrd-0.7.1> python setup.py install
```

Install Python packages (2)

Install using pip

```
pip install xlrd
```

```
pip install xlwt
```

```
pip install xlutils
```

```
pip install xlswriter
```

import modules

three types of import

`from xlrd import open_workbook`

`from xlrd import open_workbook as ow`

`Import xlrd` # recommended way

Open an Excel File

```
import xlrd
from xlrd import open_workbook
## open file
wb = open_workbook('simple.xls')
## iterate the sheets
for s in wb.sheets():
    print 'Sheet:',s.name

    ## loop through all rows and columns
    for row in range(s.nrows):
        for col in range(s.ncols):
            print s.cell(row,col).value
```

Open an Excel File

```
import xlrd
```

- xlrd is the package to read excel files.

```
wb = open_workbook('simple.xls')
```

- open a workbook

```
s.nrows, s.ncols
```

- get the number of rows and columns

```
s.cell(row,col).value
```

- get the value at cell location of (row,col)

File Handle as a Sequence

```
import xlwt

# create a workbook
book = xlwt.Workbook(encoding="utf-8")

sheet1 = book.add_sheet("ShowMeThePower")

# write something
sheet1.write(0, 0, "Python is Great!")
sheet1.write(1, 0, "Dominance")
sheet1.write(2, 0, "Test")

# save the excel file
book.save("trial.xls")
print('-_-!')
```

write a lot

```
import xlwt
```

- python package to write an excel file

```
book = xlwt.Workbook(encoding="utf-8")
```

- create a workbook

```
sheet1 = book.add_sheet("ShowMeThePower")
```

- create a sheet called "ShowMeThePower"

```
sheet1.write(0, 0, "Python is Great!")
```

- write at A1 of the excel

```
book.save("trial.xls")
```

- save the excel file

write a lot

```
import xlwt
book = xlwt.Workbook(encoding="utf-8")
sheet1 = book.add_sheet("ShowMeThePower")
for row in xrange(1,10):
    for col in xrange(1,10):
        sheet1.write(row, col, row*col)
book.save("WriteAlot.xls")
print '-_-'
```

summary

Install python packages

Import a python package

- import xlrd

Read an excel file

Write an excel file