# pandas III



#### pandas III

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#### Now capable of processing multiple input data files. (dataframes)

This is the third plugin in our pandas series. This is similar to panda-II where users can execute their Python statement sequentially like Jupyter Notebook but automatically (without Jupyter Notebook) with pandas-III. The major difference is that pandas-III enables you to take multiple data files as input.

#### **Primary Features**

This plugin runs python statement(s) on pandas on multiple input data files

- https://en.wikipedia.org/wiki/Pandas\_(software)
- https://pandas.pydata.org/pandas-docs/stable/user\_guide/10min.html

#### Prerequisite

This plugin requires Python and Regular Expression skills.

Need help?

Technical contact to tech@argos-labs.

May you search all operations,

- Actions
- Verifications
- System Calls
- Interactives

Initial download maybe slow

Please note that the pandas solution is a large software using numerous Python machine learning sub-modules. The bot will take more than just a few minutes to download them to be ready. But this is just for the "first run". As to the second run on, the local VENV will be used to avoid downloading unless new pandas II version has been selected to replace what was in the bot originally.

Update 2021.03.11

You only need the BODY part of your pandas statements to drive the pandas-II and -III plugins.

The pandas-II and -III plugins have integrated the importing, reading, and the saving parts, you only need the body part of your statements. For example, when your pandas statements look like below you only need one line in the pandas-II and -III plugins.

For pandas-II

```
# import modules
import numpy as np
import pandas as pd

This pat is not needed.

# read data frame and save into df
df = pd.read_csv('in_file.csv')

# your scripts
df['BMI'] = df['Kilograms'] / ((df ['Centimeters'] / 100.0)*(df ['Centimeters'] / 100.0))

# save the result data frame
df.to_excel('out_file.xlsx',)

This pat is not needed.
```

### For pandas-III

```
# import modules
import numpy as np
import pandas as pd

# read data frames and save interplifs pat is not needed.
dfs = list()
dfs.append (pd.read_csv('in_file1.csv')) # dfs[0]
dfs.append (pd.read_csv('in_file2.csv')) # dfs[1]

# your script
df = dfs[0].merge(dfs[1], on='sku', how='left')

# save the result data frame
df.to_excel('out_file.xlsx',)

This pat is not needed.
```

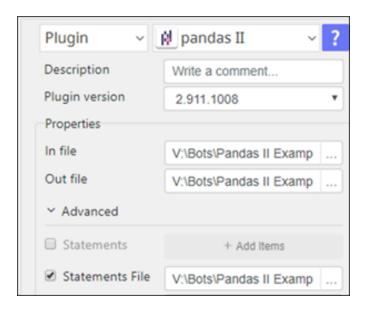
### Update 2021.02.22

### Sample Statements and Use of "df" and "dfs" variables

- 1. You must use "df" and "dfs" as variables for data-frames
  - a. As variable for the dataframes with the Python statements in pandas II and III plugins, it is required to use "df" and "dfs" to represent dataframes (all in small cases).
  - b. As for pandas III, the multiple dataframes ("dfs") will take [n] as index (it is zero based as the first set of dataframe becomes dfs[0]) as shown in examples below.

#### 2. For pandas II Statements

- a. The "In file" will be the data frame stored at "df" Python variable
- b. All pandas functionality is working with "df" data frame including Reshaping at statements File
- c. Processed results of statement's execution will continue to be stored in the same "df" variable and eventually be the "Out file"

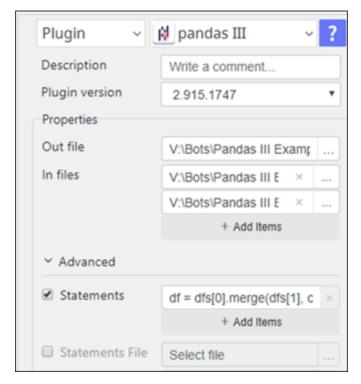


#### 3. pandas II Statements Example

- df['BMI'] = df['Kilograms'] / ((df ['Centimeters'] / 100.0)\*(df ['Centimeters'] / 100.0))
   df = df.sort\_values('BMI', ascending=False)
   df = df.sort\_values('BMI', ascending=False).groupby('Gender').head(5)

#### 4. pandas III Statements

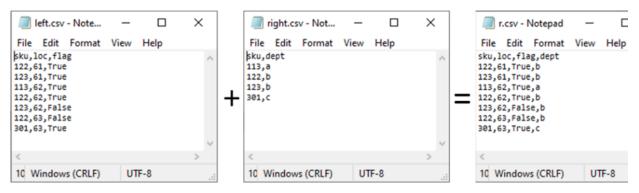
- a. "In files" will be a data frame stored at "dfs[0]", "dfs[1]",... Python variable (zero base index)
- b. All pandas functionality is working with "dfs[n]" data frames including merge
- c. Processed results of statement's execution will continue to be stored in the same "df" variable and eventually be the "Out file"



#### 5. pandas III Statements Example

• df = dfs[0].merge(dfs[1], on='sku', how='left')

Above Python represents the process illustrated below (just like vlookup feature in Excel)



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# Input, Output, Features, and Parameters.

## **Required Input**

1. Output File: One data file.

Supported input formats are .xlsm, .xls, xlsm, .csv, .tsv, and .json

2. Input Files: as many data files (dataframe) as you would like to process.

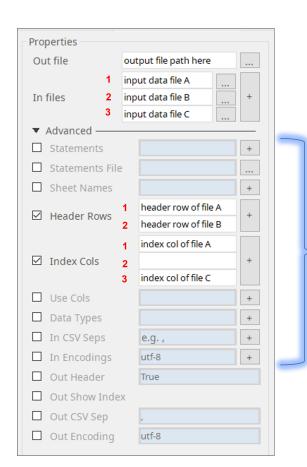
Supported input formats are .xlsm, .xls, xlsm, .csv, .tsv, and .json

## **Optional Input**

- 3. Enter a Python statement, or multiple statements. Also a text file that contains a list of statements can be used as input.
- 4. When input file multiple **sheets**, you can select which sheet to be processed.
- 5. You can designate which row you can use as header (variable) for your processing.
- 6. You can specify a column to be used as the index of the dataframe.
- 7. You can specify which column(s) to be or not to be processed.
- 8. You can determine specific pandas **datatypes** for your column.
- 9. You can determine what character to use to **separate your data** (default is comma).
- 10. You can specify **encoding** technology of the input file (default is UTF-8).
- 11. You can select to either **show or hide the index** column in your output file.

### How to set parameters

When handling multiple input data files, you must respect the input file sequence to set parameters for each one of the input files.



When entering parameters for multiple input data files, you must respect the order in the [In files] section like shown in the example here. Even when there is no parameter to give to the second file (File B), you must make one blank parameter box to skip the 2<sup>nd</sup> data file and to set up the parameter for the 3<sup>rd</sup> data file. Omitting the following files are OK.

pandas-III plugin parameters are 100% compatible to pandas read\_excel specifications

• https://pandas.pydata.org/pandas-docs/stable/reference/api/pandas.read\_excel.html

Please refer the parameters on the right in the pandas document above.

Sheet Name
 Header Row
 Index Col
 Use Col
 Data Type
 sheet\_name
 header
 index\_cols
 usecols
 dtypes

		Output	file (no need to exist) in .xls .xlsx .xlsm .csv .tsv and .json
Properties			
Out file	output file path here		
	input data file A		At least one or multiple input file in .xls .xlsx .xlsm .csv .tsv
In files	input data file B	+	and .json
	input data file C		
▼ Advanced ——			One Python statement or multiple python statements.
Statements		+	You can use a text file that contains a series of Python statements as well.
Statements File			
☐ Sheet Names		+	Header row default is 0 meaning the top row. You can change it
☑ Header Rows	header row of file A	+	here.
_ ricader rions	header row of file B		If index column needs to be specified, use 0 base index here.
	index col of file A		in index column needs to be specified, use o base index fiere.
☑ Index Cols		+	Defeate was dead data how a decrease.
	index col of file C		Refer to pandas data type document.
☐ Use Cols		+	
☐ Data Types		+	For input files, data separation character can be changed here.
☐ In CSV Seps	e.g. ,	+	
☐ In Encodings	utf-8	+	Define header to show or not for the output file.
☐ Out Header	True		befine header to show of not for the output life.
☐ Out Show Inde	×		Define whether or not the index column to show in the output file.
☐ Out CSV Sep	,		
☐ Out Encoding	utf-8		Define data separation character for the output file.
Define encoding standard for he output file.			

## **All Plugins** ABBYY DownloadABBYY StatusABBYY Upload AD LDAP Adv Send EmailAPI RequestsARGOS API Arithmetic OpASCII Converter Attach Image AWS S3 AWS Textra Rekog • Base64 Basic Numerical Operations Basic String Manipulation Bot Collabo BoxBox II Chatwork GetMessageChatwork Notification Citizen Log ClipboardCodat API Convert CharSet Convert Image Convert Image II Create Newfile

- CSV2XLSX
- Data Plot I
- DeepL Free
- Detect CharSet
- Dialog Calendar
- Dialog ErrorDialog File Selection
- Dialog Forms
- Dialog Info
- Dialog PasswordDialog Question
- Dialog Text EntryDialog Text InfoDialog Warning
- DirectCloud API
- Doc2TXT
- DocDigitizer Get Doc
- DocDigitizer Tracking
- DocDigitizer Upload
- Docker Remote Service
- Drag and Drop
- Dropbox
- Dynamic PythonEmail IMAP ReadMon
- Email Read Mon
- Env Check
- Env Var
- Excel2Image
- Excel Advanced
- Excel Advance IV
- Excel AdvII
- Excel AdvIII
- Excel Copy Paste
- Excel Formula
- Excel Large Files
- Excel Macro
- Excel Newfile
- Excel Simple Read
- Excel Simple Write
- Excel Style
- Excel Update
- Fairy Devices mimi Al
- File Conv
- File Downloader
- File Folder Exists
- File Folder Op
- File Status
- Fixed Form Processing
- Floating Form Processing
- Folder Monitor
- Folder Status
- Folder Structure
- FTP Server
- Git HTML Extract
- Google Calendar
- Google Cloud Vision API
- Google Drive
- Google Search API
- Google Sheets
- Google TokenGoogle Translate
- Google TTS
- GraphQL API
- Html Extract HTML Table
- IBM Speech to Text
- IBM Visual Recognition
- Java UI Automation
- JP Holiday
- JSON Select
- JSON to from CSV
- Lazarus Forms
- Lazarus Invoices Lazarus RikAl
- Lazarus Riky
- LINE ID Card OCR
- LINE NotifyLINE Receipt OCR
- Microsoft Teams

- MongoDB
- MQTT Publisher
- MS Azure Text Analytics
- MS Word Extract
- NAVER OCR
- Newuser-SFDC
- OCI
- OCR PreProcess
- OpenAl API
- Oracle SQL
- Outlook
- Outlook Email
- PANDAS I
- pandas II
- pandas III
- PANDAS profiling
- Parsehub
- Password Generate
- Path Manipulation
- PDF2DocPDF2Table
- PDF2TXT
- PDF MinerPDF SplitMerge
- PostgreSQL
- PowerShell
- PPTX Template
- Print 2 Image
- Python Selenium
- QR Generate
- QR Read
- RakurakuHanbai API
- RegressionRename FileREST API
- Rossum
- Running GAS
- Scrapy Basic
- Screen Capture
- Screen Recording STARTScreen Recording STOP
- Screen Snipping
- Seaborn Plot
- SharePoint • Simple Counter
- Simple SFDC
- Slack
- Sort CSV
- Speed Test
- SQL
- SQLite
- SSH Command
- SSH CopyString ManipulationString Similarity
- Svc Check
- Sys Info
- Telegram
- Tesseract Text2PDF
- Text2Word
- Text Read Text Write
- Time Diff
- Time Stamp
- Web Extract
- Windows Op
- Windows Screen Lock
- Win UI Control Win UI Text
- Word2PDF
- Word2TXT
- Word Editor
- Work Calendar
- XML Extract
- XML Manipulation Xtracta Get Doc
- Xtracta Tracking
- Xtracta Upload

- YouTube OperationZipUnzip