Tableprint Documentation

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About

Tableprint is a library for printing out numerical data in Ascii formatted tables. Check it out on *github*. You can use it to print single rows of data at a time (useful for printing ongoing computation results).

CHAPTER 2

Installation

Using `pip`:

```
$ pip install tableprint
```

CHAPTER 3

Quickstart

Tableprint offers two functions that print a table directly, `tableprint.table` and `tableprint.dataframe`. The first takes a numpy array and a list of headers, whereas the second takes a pandas DataFrame as input. For example, you can do the following:

```
>>> tableprint.table(np.random.randn(10, 3), ['A', 'B', 'C'])
```

If you want to append to a table on the fly, you can use the functions `tableprint.header`, `tableprint.row`, and finally `tableprint.bottom`. These functions return a formatted string given a list of headers, an array of data, and a number of columns, respectively. For example

```
>>> print(tableprint.header(['A', 'B', 'C']))
>>> for ix in range(10):

        # insert time-intensive data collection here
        data = np.random.randn(3)

        # print data to stdout
        print(tableprint.row(data), flush=True)

>>> print(tableprint.bottom(3))
```

Sometimes you just want to print a fancy string but without any numbers. In that case, you can use the `tableprint.banner` function:

```
>> tableprint.banner("Hello, World!")
```

All of these functions take two optional keyword arguments, a `width` that defines the width of each column and a `style` that specifies what unicode or ascii characters to use to build the table. The available styles are: `round` (default), `fancy_grid`, `grid`, `clean`, and `block`.

CHAPTER 4

API

tableprint.**table**(*data*, *headers=None*, *format_spec='5g'*, *width=None*, *align='right'*, *style='round'*, *out=<_io.TextIOWrapper name='<stdout>' mode='w' encoding='UTF-8'>*)

Print a table with the given data

data: array_like An (m x n) array containing the data to print (m rows of n columns)

headers: list, optional A list of n strings consisting of the header of each of the n columns (Default: None)

format_spec: string, optional Format specification for formatting numbers (Default: '5g')

width: int or None or array_like, optional The width of each column in the table. If None, tries to estimate an appropriate width based on the length of the data in the table. (Default: None)

align: string, optional The alignment to use ('left', 'center', or 'right'). (Default: 'right')

style: string or tuple, optional A formatting style. (Default: 'fancy_grid')

out: IO writer, optional File handle or object used to manage IO (displaying the table). Must have a write() method that takes a string argument, and a flush() method. See sys.stdout for an example. (Default: 'sys.stdout')

tableprint.**TableContext**(*headers*, *width=11*, *align='right'*, *style='round'*, *add_hr=True*, *out=<_io.TextIOWrapper name='<stdout>' mode='w' encoding='UTF-8'>*)

tableprint.**dataframe**(*df*, ***kwargs*)

Print table with data from the given pandas DataFrame

df: DataFrame A pandas DataFrame with the table to print

tableprint.**banner**(*message*, *width=30*, *style='banner'*, *out=<_io.TextIOWrapper name='<stdout>' mode='w' encoding='UTF-8'>*)

Prints a banner message

message: string The message to print in the banner

width: int The minimum width of the banner (Default: 30)

style: string A line formatting style (Default: 'banner')

out: writer An object that has write() and flush() methods (Default: sys.stdout)

tableprint.**header**(*headers*, *width=None*, *align='right'*, *style='round'*, *add_hr=True*)
Returns a formatted row of column header strings

headers: list of strings A list of n strings, the column headers

width: int, optional The width of each column. If None, automatically determines the width. (Default: None)

style: string or tuple, optional A formatting style (see STYLES)

headerstr [string] A string consisting of the full header row to print

tableprint.**row**(*values*, *width=None*, *format_spec='5g'*, *align='right'*, *style='round'*)
Returns a formatted row of data

values: array_like An iterable array of data (numbers or strings), each value is printed in a separate column

width: int, optional The width of each column. If None, automatically determines the width. (Default: None)

format_spec: string, optional The precision format string used to format numbers in the values array (Default: '5g')

align: string, optional The alignment to use ('left', 'center', or 'right'). (Default: 'right')

style: namedtuple, optional A line formatting style

rowstr: string A string consisting of the full row of data to print

tableprint.**top**(*n*, *width=11*, *style='round'*)
Prints the top row of a table

tableprint.**bottom**(*n*, *width=11*, *style='round'*)
Prints the top row of a table

tableprint.**humantime**(*time*)
Converts a time in seconds to a reasonable human readable time

t [float] The number of seconds

time [string] The human readable formatted value of the given time

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