
Tableprint Documentation

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CHAPTER 1

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`.


```
tableprint.table (data, headers=None, format_spec='5g', width=11, 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 array_like, optional] The width of each column in the table (Default: 11)

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

out [writer, optional] A file handle or object that has write() and flush() methods (Default: sys.stdout)

```
tableprint.TableContext (headers, width=11, 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=11, 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] The width of each column (Default: 11)

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=11, format_spec='5g', 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] The width of each column (Default: 11)

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

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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