

# atz\_make\_latex\_table\_ex1

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## 0.1 LaTeX Table Writer

Paul J. Atzberger <http://atzberger.org>

Writes LaTeX for table of data.

```
In [6]: import numpy as np;
import os;

script_base_name = 'atz_make_latex_table_ex1'; # script name without extension

print("LaTeX Table Writer.");
print("Paul J. Atzberger");
print("http://atzberger.org");
print("");
print("Writes LaTeX for table of data.");
print("");

print("Packages:");
print("numpy.__version__ = " + str(np.__version__));
print("script_base_name = " + script_base_name);
```

LaTeX Table Writer.

Paul J. Atzberger

<http://atzberger.org>

Writes LaTeX for table of data.

Packages:

numpy.\_\_version\_\_ = 1.16.1

script\_base\_name = atz\_make\_latex\_table\_ex1

```
In [2]: base_dir = './output/%s'%(script_base_name);
if not os.path.exists(base_dir):
    os.makedirs(base_dir);
print("base_dir = " + base_dir);
```

base\_dir = ./output/atz\_make\_latex\_table\_ex1

```

In [3]: def make_table_1(values,row_labels,column_labels):
        num_rows = len(row_labels); num_cols = len(column_labels);
        # create the table
        s = "";

        # write opening
        s += r"\begin{tabular}";
        s += "{1|";
        s += (num_cols - 1)*"c" + "}" + "\n";

        # write row header
        for j in range(0,num_cols):
            if j > 0:
                s += r" & ";
            s += r"%s"%column_labels[j];
            if j == num_cols - 1:
                s+= r"\" + "\n";

        s += r"\cline{1-%d}"%num_cols + "\n";
        for i in range(0,num_rows):
            s += r"%s"%row_labels[i];
            for j in range(0,num_cols-1):
                val = values[i,j];
                s += " & %.2e"%val;
                if j == num_cols - 2:
                    s += r"\" + "\n";

        s += r"\end{tabular}" + "\n";

        return s;

```

```

In [4]: # --- Make Table:
        row_labels = [];
        row_labels.append(r'First Run Name');
        row_labels.append(r'Another Run Name');

        column_labels = [];
        column_labels.append(r'Method:');
        column_labels.append(r'1000');
        column_labels.append(r'2000');
        column_labels.append(r'3000');
        column_labels.append(r'Final');

        num_rows = len(row_labels); num_cols = len(column_labels);
        values = np.random.rand(num_rows,num_cols-1);

        # --
        s = make_table_1(values,row_labels,column_labels);

```

```
print(s)
print("Write file:");
filename = '%s/test_table_2.tex'%base_dir;
print("filename = " + filename);
fid = open(filename,'w');
fid.write(s);
fid.close();
```

```
\begin{tabular}{l|cccc}
Method: & 1000 & 2000 & 3000 & Final\\
\cline{1-5}
First Run Name & 6.19e-02 & 7.30e-01 & 4.68e-01 & 5.64e-01\\
Another Run Name & 6.43e-01 & 9.13e-02 & 6.67e-01 & 6.44e-01\\
\end{tabular}
```

```
Write file:
filename = ./output/atx_make_latex_table_ex1/test_table_2.tex
```