

Using PythonTeX on Overleaf

Lian Tze Lim

You need the pythontex package, and you need a custom latexmkrc file, e.g. from http://mirror.unl.edu/ctan/support/latexmk/example_rcfiles/pythontex-latexmkrc.

Examples below are taken from https://tug.org/tug2013/slides/Mertz-A_Gentle_Introduction_to_PythonTeX.pdf

```
\py{2+2}
```

4

Did you know that $2^{65} = \text{\py{2**65}}$?

Did you know that $2^{65} = 36893488147419103232$?

```
\begin{pycode}
lo, hi = 1, 6
print(r"\begin{tabular}{c|c}")
print(r"$m$ & $2^m$ \\\hline")
for m in range(lo, hi + 1):
    print(r"%d & %d \\" % (m, 2**m))
print(r"\end{tabular}")
\end{pycode}
```

m	2^m
1	2
2	4
3	8
4	16
5	32
6	64

Plot average monthly TMAX

```
import numpy as np
import matplotlib.pyplot as plt
from mpl_toolkits.mplot3d import Axes3D

fig = plt.figure()
ax = Axes3D(fig)
X = np.arange(-4, 4, 0.25)
Y = np.arange(-4, 4, 0.25)
X, Y = np.meshgrid(X, Y)
R = np.sqrt(X ** 2 + Y ** 2)
Z = np.sin(R)

ax.plot_surface(X, Y, Z, rstride=1, cstride=1, cmap=plt.cm.hot)
ax.contourf(X, Y, Z, zdir='z', offset=-2, cmap=plt.cm.hot)
ax.set_zlim(-2, 2)
plt.show()
plt.savefig('discontinua-new.png')
```

