

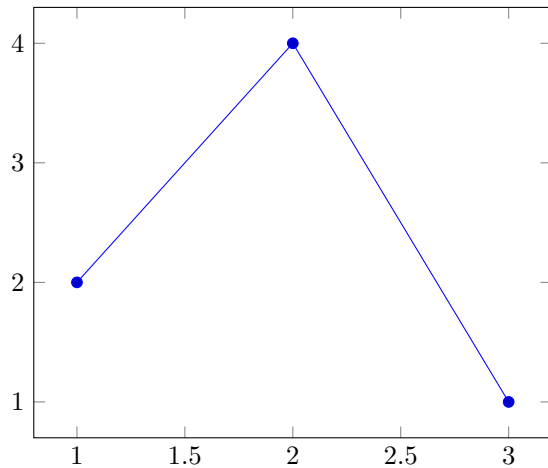
More TeX.jl Examples using PGFPlots.jl

Abstract—Additional examples using PGFPlots.jl based on the documentation: <https://nbviewer.jupyter.org/github/JuliaTeX/PGFPlots.jl/blob/master/doc/PGFPlots.ipynb>

I. LINEAR

The following Julia code produces the plot below.

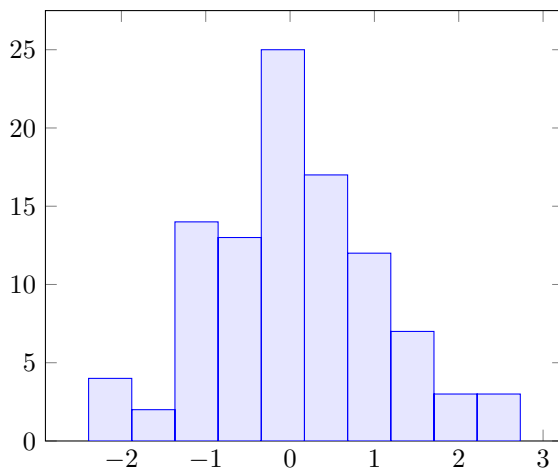
```
1 using PGFPlots
2 x = [1,2,3]
3 y = [2,4,1]
4 p = Plots.Linear(x, y)
5 addplot!(doc, p)
```



II. HISTOGRAMS

Histograms using normally distributed data: $\mathcal{N}(0, 1)$.

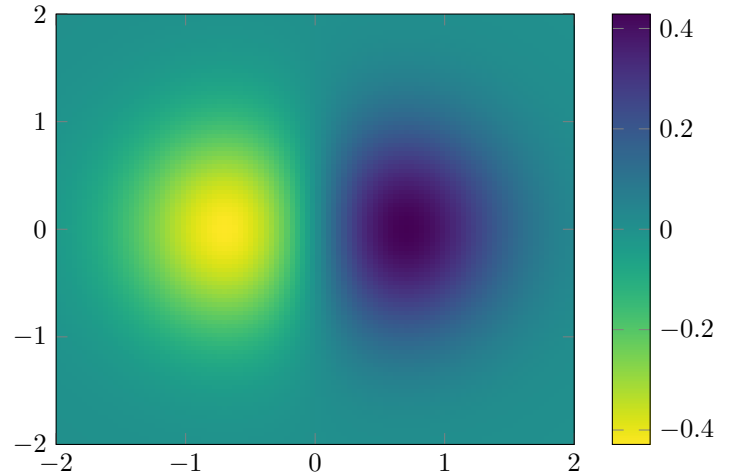
```
1 d = randn(100)
2 a = Axis(Plots.Histogram(d, bins=10), ymin=0)
3 addplot!(doc, a)
```



III. IMAGES

Image plots create a PNG bitmap and are useful for visualizing 2D functions.

```
1 using ColorSchemes
2 import PGFPlots.ColorMaps: RGBArrayMap
3 c = RGBArrayMap(ColorSchemes.viridis,
4                 interpolation_levels=500,
5                 invert=true)
6 h = (x,y)->x*exp(-x^2-y^2)
7 img = Plots.Image(h, (-2,2), (-2,2), colormap=c)
8 addplot!(doc, img)
```



IV. SMITH CHARTS

These are often used in radio-frequency engineering.

```
1 sa = SmithAxis([
2     PGFPlots.SmithCircle(1, 1, 2, style="blue"),
3     PGFPlots.SmithCircle(0.5, -1, 1, style="red")
4 ])
5 addplot!(doc, sa)
```

