# PGFPlot-A simple tutorial*

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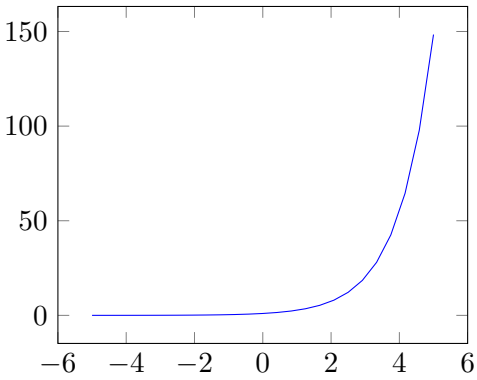
## Contents

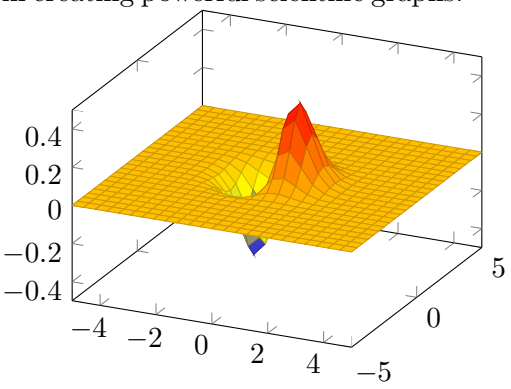


*This tutorial is taken from this link with some modifications for personal pleasure!

# I The Basic

Pgfplots is a powerful package specialized in creating powerful scientific graphs.

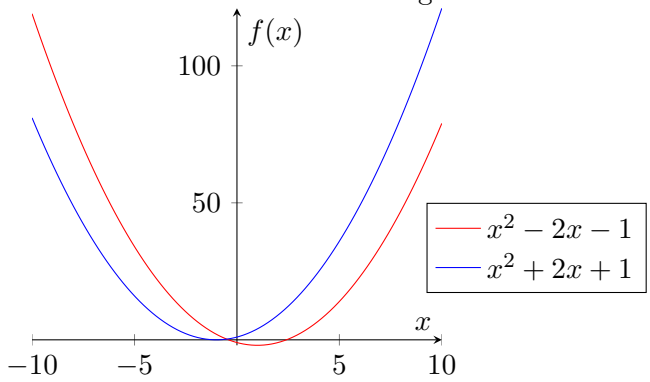



We now get to some more details on 2D plot.

# II 2D Plot

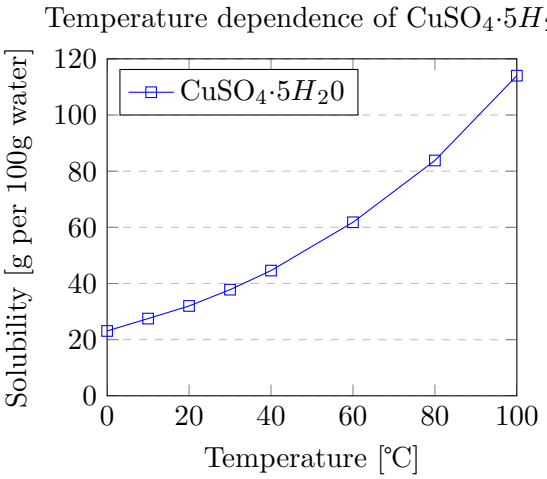
What the heck...Let's do some damage!




Come on man!!!! Let's make some plots from data.

## II.1 Plotting from data

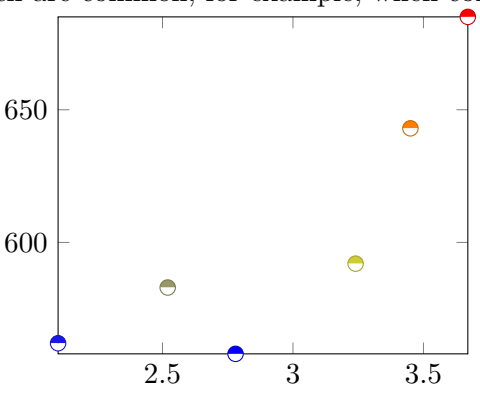
I love to test ℃




When the data is in a file, put `\addplot table {file_with_the_data.dat}` instead of using `\addplot coordinates {}`.

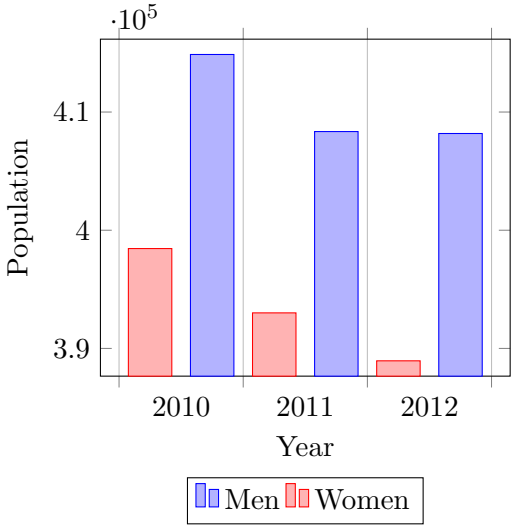
## II.2 Scatter plots

Scatter plot is used to represent information by using some kind of marks, which are common, for example, when computing statistical regression.




## II.3 Bar graphs

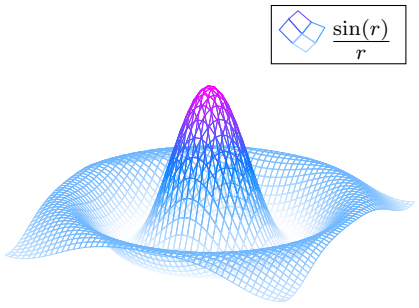
Bar graphs are used to display gathered data.




# III 3D Plots

For the basic plot, we refer to section I. We now use mesh feature for the plot.

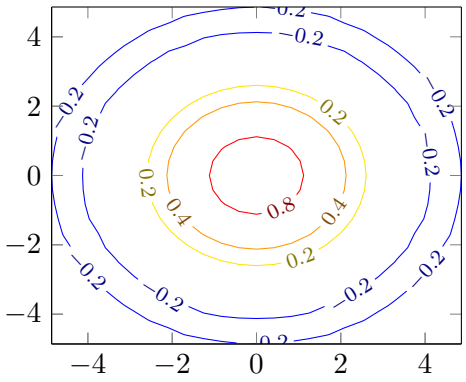
Example using the mesh parameter




## III.1 Contour plot

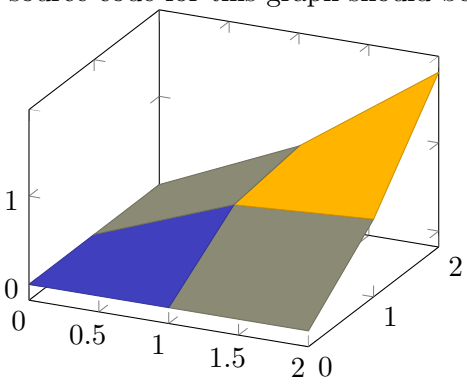
The data needs to be calculated by external programs(gnutplot, mathematica, etc. . . )

Contour plot, view from top




## III.2 Plotting a surface from data

The source code for this graph should be self-explanatory.




## III.3 Ploting parametric curve

A sample of the parametric plot is here, but I do not know what a parametric means at this moment! Therefore, this is blindly copied from the tutorial source.