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Gnuplot

Snippet from [Wikipedia: Gnuplot](#)

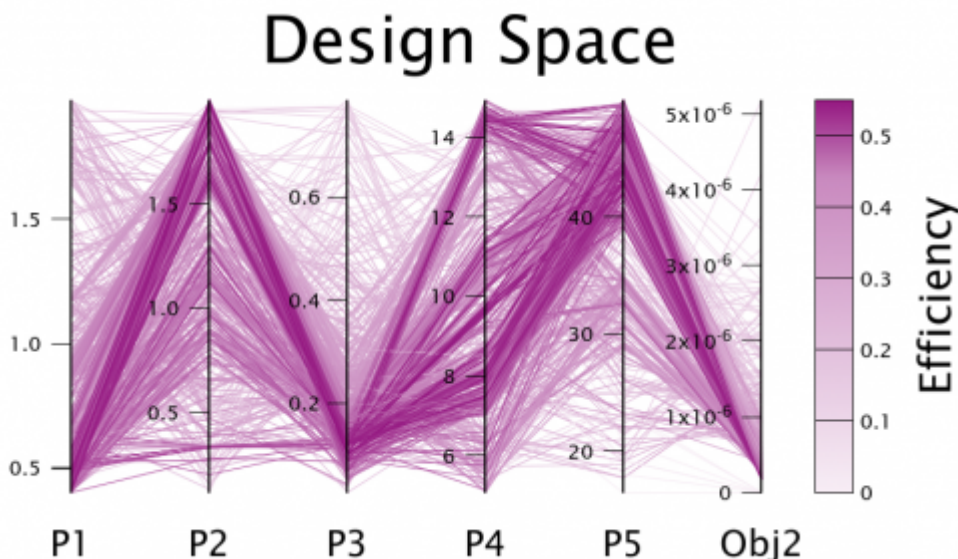
gnuplot is a command-line and GUI program that can generate two- and three-dimensional plots of functions, data, and data fits. The program runs on all major computers and operating systems (Linux, Unix, Microsoft Windows, macOS, FreeDOS, and many others). Originally released in 1986, its listed authors are Thomas Williams, Colin Kelley, Russell Lang, Dave Kotz, John Campbell, Gershon Elber, Alexander Woo "and many others." Despite its name, this software is not part of the GNU Project.

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Ressources

- [Official documentation](#)
- [Gnuplot cookbook \(ebook via UB\)](#)

Gnuplot - Parallel plot



For optimizations with multiple parameter or objectives it can be difficult to show any comprehensive results.

In some cases a so-called parallel plot has shown to be of some help.

Moreover, this script tries to match the faculty's corporate design, colors and design.

Known bugs:

- The axis boundaries are not drawable (in the used gnuplot version) eventhough they are not set

here

Supplementary Files

[Data basis](#)

[parameterSpace.plt](#)

```
set terminal pngcairo size 928,528 font 'Lucida Sans, 30' background
rgb 'white'
set output 'parameterSpace.png'

set locale "de_DE.UTF-8"

set palette defined ( 0 '#f7edf5', 0.8 '#c98abf' ,1 '#941680' )

grid_color = "#d5e0c9"
text_color = "#000000"
vstfontbig = "Lucida Sans, 45"
vstfontnormal = "Lucida Sans, 30"
vstfontsmall = "Lucida Sans, 25"
vstfontsmallest = "Lucida Sans, 14"
vstviolet_150 = "#610052"
vstviolet_125 = "#790a68"
vstviolet_100 = "#941680"
vstviolet_075 = "#9f328e"
vstviolet_050 = "#b353a4"
vstgreen_150 = "#2d7800"
vstgreen_125 = "#40960d"
vstgreen_100 = "#55b81b"
vstgreen_075 = "#71c63e"
vstgreen_050 = "#93de67"
vstyellow_150 = "#898000"
vstyellow_125 = "#aca10e"
vstyellow_100 = "#d2c61f"
vstyellow_075 = "#e2d847"
vstyellow_050 = "#fef475"

set pointsize 1.0

set key font vstfontsmall textcolor rgb text_color
set xtics ("P1" 1, "P2" 2, "P3" 3, "P4" 4, "P5" 5, "Obj2" 6) font
vstfontsmall textcolor rgb text_color nomirror

unset key
unset ytics
```

```
unset border

set label 'Design Space' at screen 0.5,0.93 center textcolor rgb
text_color font vstfontbig
set title
set xlabel ""
set xlabel "Efficiency" font vstfontnormal textcolor rgb text_color
set cblabel font vstfontsmallest textcolor rgb text_color offset -1
set cblabel font "" textcolor lt -1 rotate by -270 offset -2.5
set cbrange [ 0 : 0.55 ] noreverse nowriteback

set xrange [0.75:6.25]

set paxis 1 tics 0.5 textcolor rgb text_color font vstfontsmallest
offset 1.5 right format "%1.1f"
set paxis 2 tics 0.5 textcolor rgb text_color font vstfontsmallest
offset 1.5 right format "%1.1f"
set paxis 3 tics 0.2 textcolor rgb text_color font vstfontsmallest
offset 0. right format "%1.1f"
set paxis 4 tics 2 textcolor rgb text_color font vstfontsmallest offset
1.5 right format "%1.0f"
set paxis 5 tics 10 textcolor rgb text_color font vstfontsmallest
offset 1.5 right format "%1.0f"
set paxis 6 tics textcolor rgb text_color font vstfontsmallest offset
1.5 right

set paxis 1 range [ * : * ] noreverse nowriteback
set paxis 2 range [ * : * ] noreverse nowriteback
set paxis 3 range [ * : * ] noreverse nowriteback
set paxis 4 range [ * : * ] noreverse nowriteback
set paxis 5 range [ * : * ] noreverse nowriteback
set paxis 6 range [ * : * ] noreverse nowriteback

set my2tics 5

set rmargin 0
set bmargin 1.5
set tmargin 2

plot "GenValid.csv" using 6:10:9:7:8:5:4 with parallel lt 1 lc palette
notitle
```

[Guide, gnuplot, ParallelPlot](#)

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