How To Choose A Chart - A Statistically Informed Visual Guide With Stata Commands

Continuous

histogram

`histogram x`

density

`kdensity x`

bar graph of mean

`graph bar x`
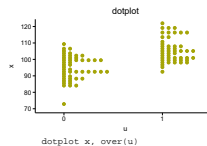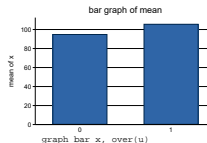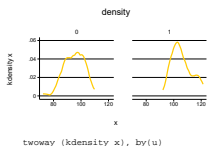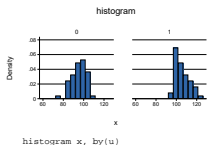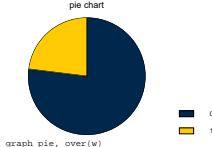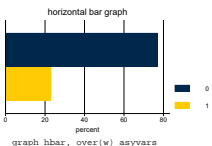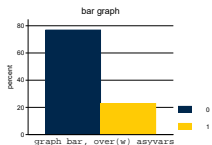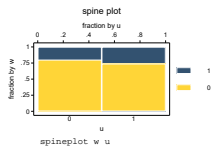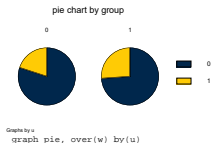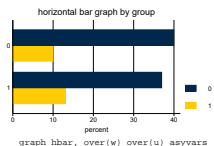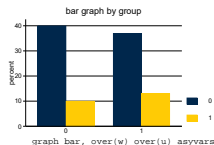
dotplot

`dotplot x`
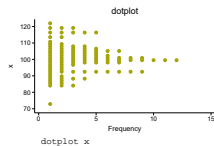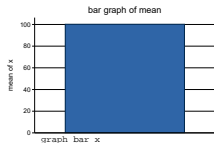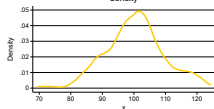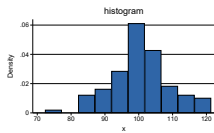
Continuous by Categorical

histogram

`histogram x, by(u)`

density

`twoway (kdensity x), by(u)`

bar graph of mean

`graph bar x, over(u)`

dotplot

`dotplot x, over(u)`

Categorical

bar graph

`graph bar, over(w) asyvars`

horizontal bar graph

`graph hbar, over(w) asyvars`

pie chart

`graph pie, over(w)`

spine plot

`spineplot w u`

Categorical by Categorical

bar graph by group

`graph bar, over(w) over(u) asyvars`

horizontal bar graph by group

`graph hbar, over(w) over(u) asyvars`

pie chart by group

`graph pie, over(w) by(u)`

Continuous by Continuous

scatterplot

`twoway scatter y x`

heatplot

`heatplot y x`

scatterplot with linear fit

`twoway (scatter y x) (lfit y x)`

scatterplot with smoother

`twoway (scatter y x) (lowess y x)`
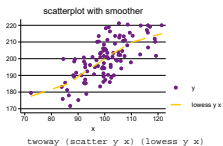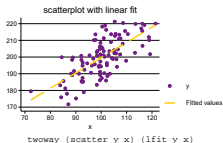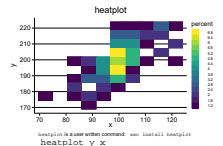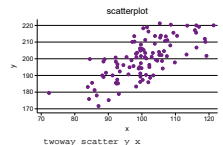
Stata commands are in `monospaced font`
I try to present the simplest version of a command, but to make this handout made use of options like `fcolor`, `mcolor`, and `lcolor` to tweak the color and appearance of graphs.
Option `asyvars` is not strictly necessary, but means that bar graphs will have bars of different colors.

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