Installing and Using the Michigan Graph Scheme

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21 Feb 2023 16:13:53
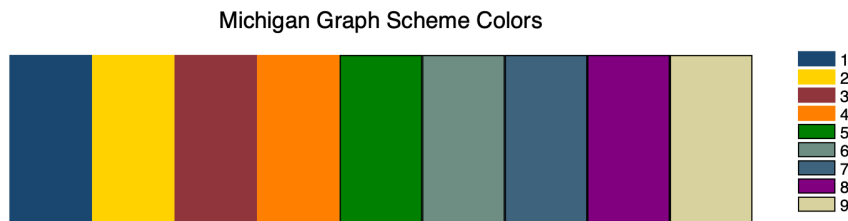
Introduction

Michigan Graph Scheme Colors

Figure 1: Colors in Michigan Graph Scheme

Stata provides the use of graph schemes that improve the overall look of graphs.

See `help scheme`.

The *Michigan graph scheme* makes use of official University of Michigan colors.

Installation

Use of the *Michigan graph scheme* depends on installation of the `lean2` graph scheme developed by Svend Juul.

Type `findit lean2` and click through on the install links to install `lean2`.

Then type `net from https://agrogan1.github.io/Stata` and click the links to install.

Example Data

We are going to use the famous "iris" data collected by Edgar Anderson.

```
. clear all
.
. use "iris.dta", clear
.
. summarize
    Variable |        Obs        Mean    Std. dev.       Min        Max
-------------+---------------------------------------------------------
Sepal_Length |        150    5.843333    .8280661        4.3        7.9
 Sepal_Width |        150    3.057333    .4358663          2        4.4
Petal_Length |        150       3.758    1.765298          1        6.9
 Petal_Width |        150    1.199333    .7622377         .1        2.5
     Species |        150           2    .8192319          1          3
```

Histogram

```
. histogram Petal_Length, scheme(michigan)
(bin=12, start=1, width=.49166667)
```
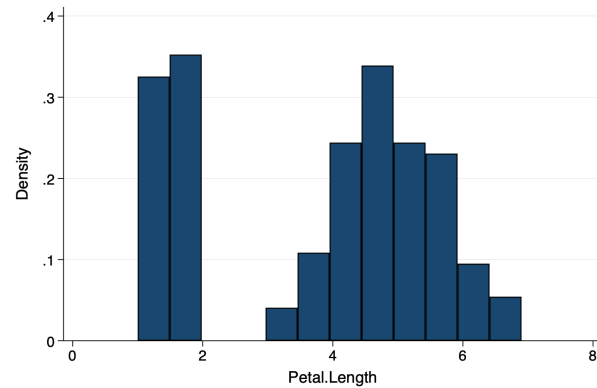

Figure 2: Histogram Using Michigan Scheme

Histogram With Transparency

```
. histogram Petal_Length, fcolor(%50) scheme(michigan)
(bin=12, start=1, width=.49166667)
```
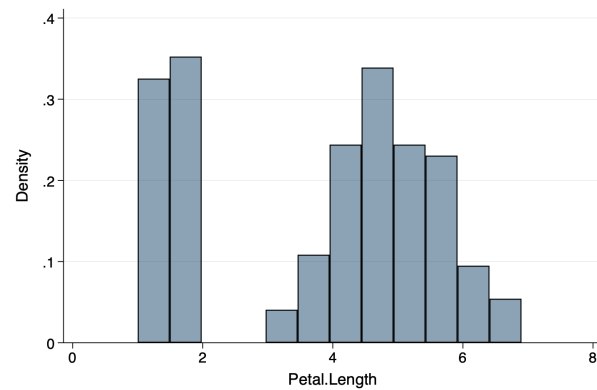

Figure 3: Histogram Using Michigan Scheme And Slightly Transparent Bars

Bar Graph

```
. graph bar Petal_Length, over(Species) scheme(michigan) asyvars
```

Bar Graph With Transparency

```
. graph bar Petal_Length, over(Species) intensity(70) scheme(michigan) asyvars
```
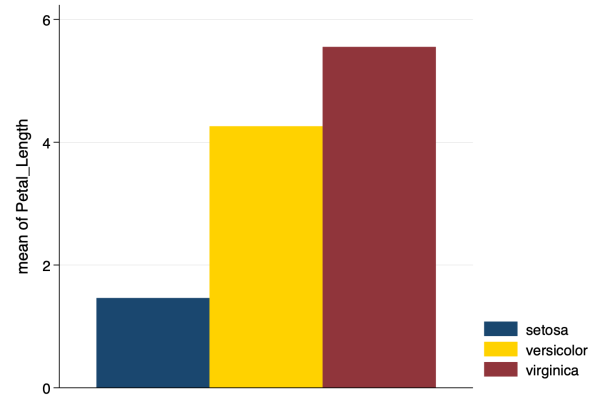
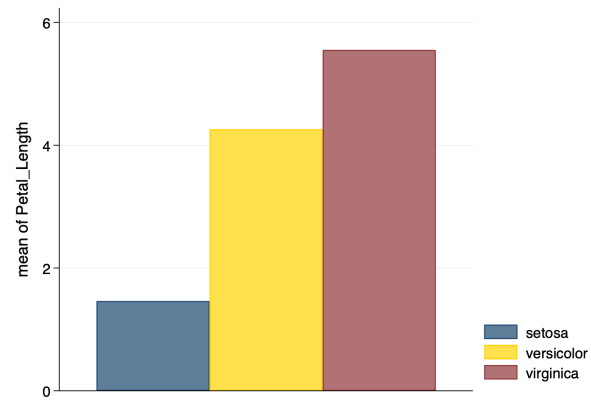Figure 4: Bar Graph Using Michigan Scheme

Figure 5: Bar Graph Using Michigan Scheme and Slightly Transparent Bars

Scatterplot

```
. twoway (scatter Petal_Length Petal_Width) ///
> (lfit Petal_Length Petal_Width), ///
> scheme(michigan)
```
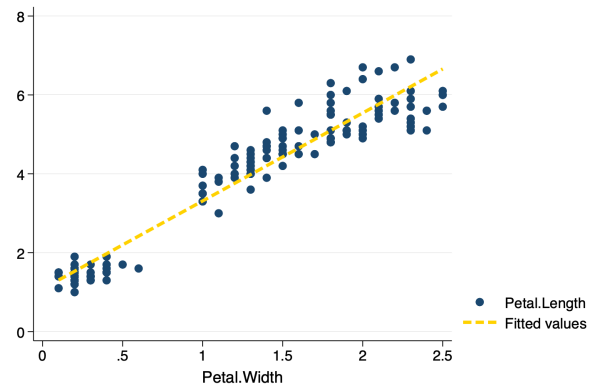
Figure 6: Scatterplot Using Michigan Scheme

Scatterplot With Transparency

```
. twoway (scatter Petal_Length Petal_Width, mcolor(%30)) /// markers have 30% transparency
> (lfit Petal_Length Petal_Width), ///
> scheme(michigan)
```
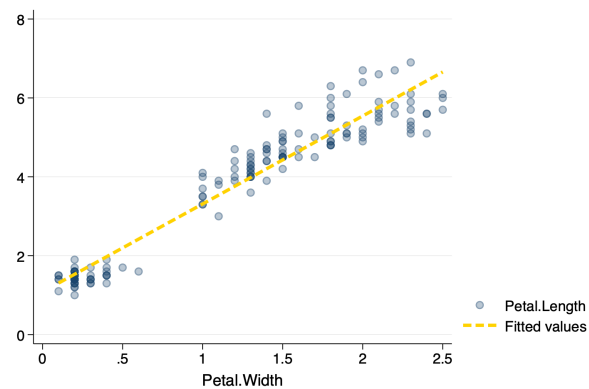
Figure 7: Scatterplot Using Michigan Scheme And Slightly Transparent Markers

Legend Placement

Sometimes you may wish to have the legend of the graph placed at the *bottom* of the graph. The `pos(6)` suboption inside the `legend` option will place the legend at the bottom, while you can manually control the number of legend rows with the `rows` suboption.

```
. graph bar Petal_Length, over(Species) scheme(michigan) asyvars legend(pos(6) rows(1))
```
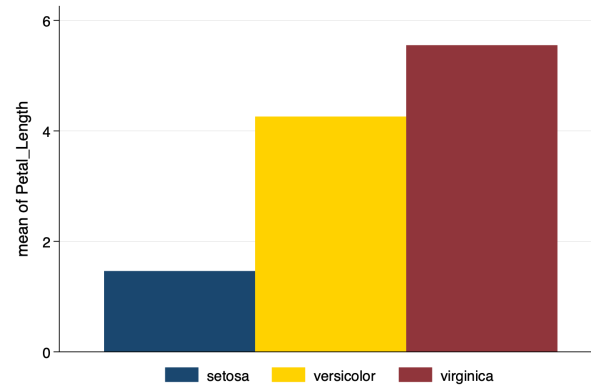
Figure 8: Bar Graph Using Michigan Scheme and Modified Legend

Individual Michigan Colors

Individual University of Michigan colors are listed below.

Color	Hex	RGB
Blue	#00274C	0 39 76
Maize	#FFCB05	255 203 5
Tappan Red	#9A3324	154 51 36
Ross School Orange	#D86018	216 96 24
Wave Field Green	#A5A508	165 165 8
Taubman Teal	#00B2A9	0 178 169
Arboretum Blue	#2F65A7	47 101 167
Ann Arbor Amethyst	#702082	112 32 130
Matthaei Violet	#575294	87 82 148
Umma Tan	#CFC096	207 192 150
Burton Tower Beige	#9B9A6D	155 154 109
Angell Hall Ash	#989C97	152 156 151
Law Quad Stone	#655A52	101 90 82

Stata can use RGB codes for colors. As an example.

```
. twoway (scatter Petal_Length Petal_Width, mcolor("112 32 130 %30")) /// markers are Amethyst with
>  30% transparency
> (lfit Petal_Length Petal_Width, lcolor("87 82 148")), /// Violet line
> scheme(michigan)
```
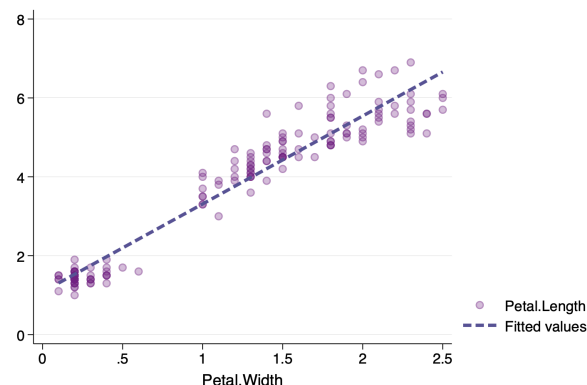

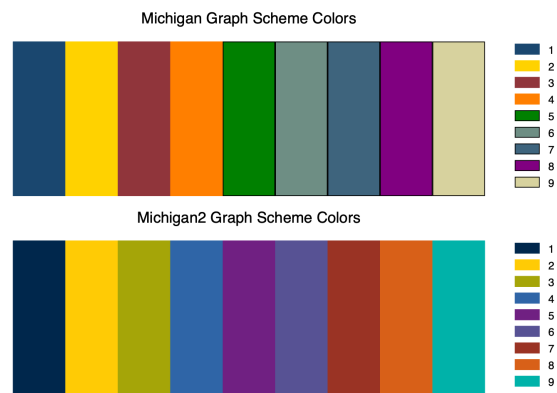Figure 9: Scatterplot Using Michigan Scheme, Selected Colors, And Slightly Transparent Markers

Michigan2 Graph Scheme

Figure 10: Colors in Michigan Graph Schemes