# GR5702
# Exploratory Data Analysis and Visualization

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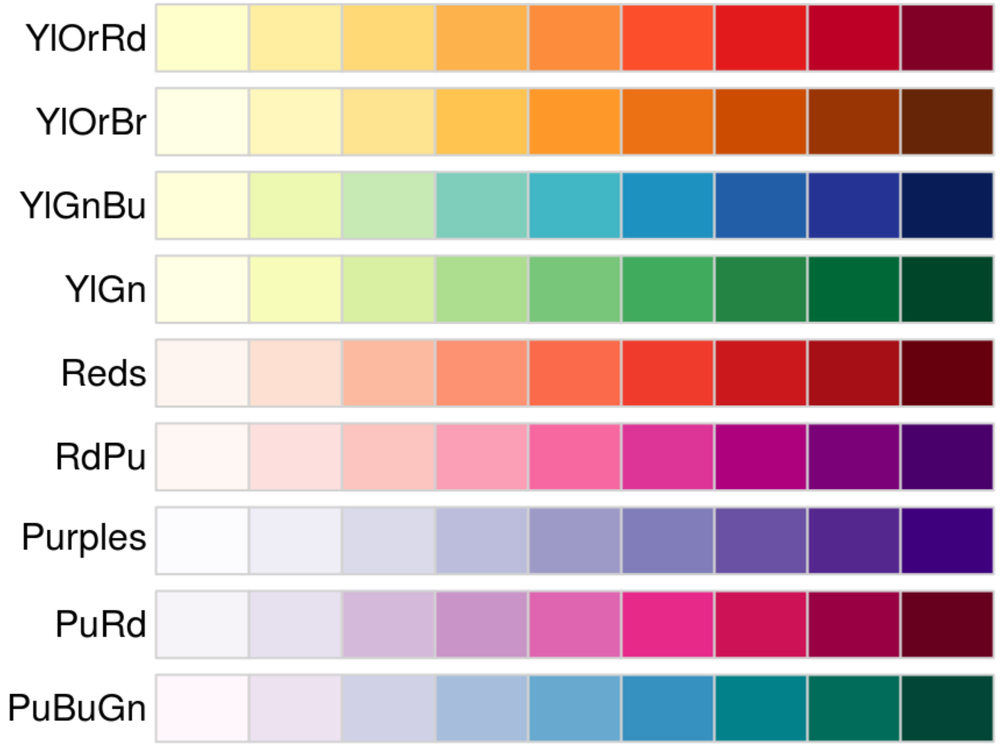
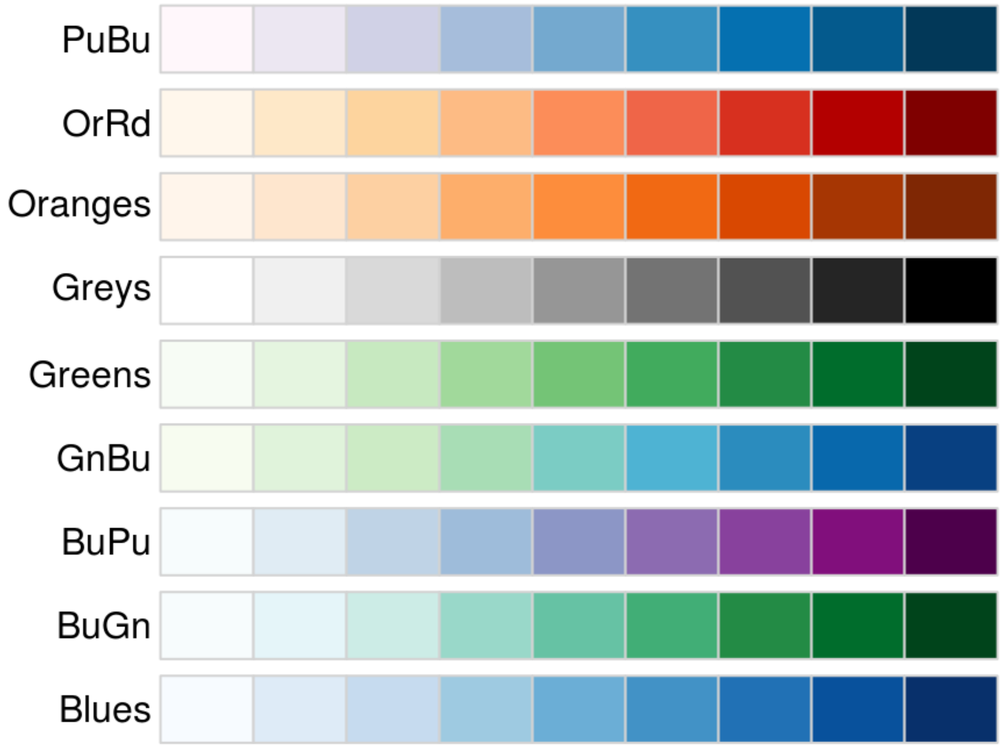
# RColorBrewer Color Schemes

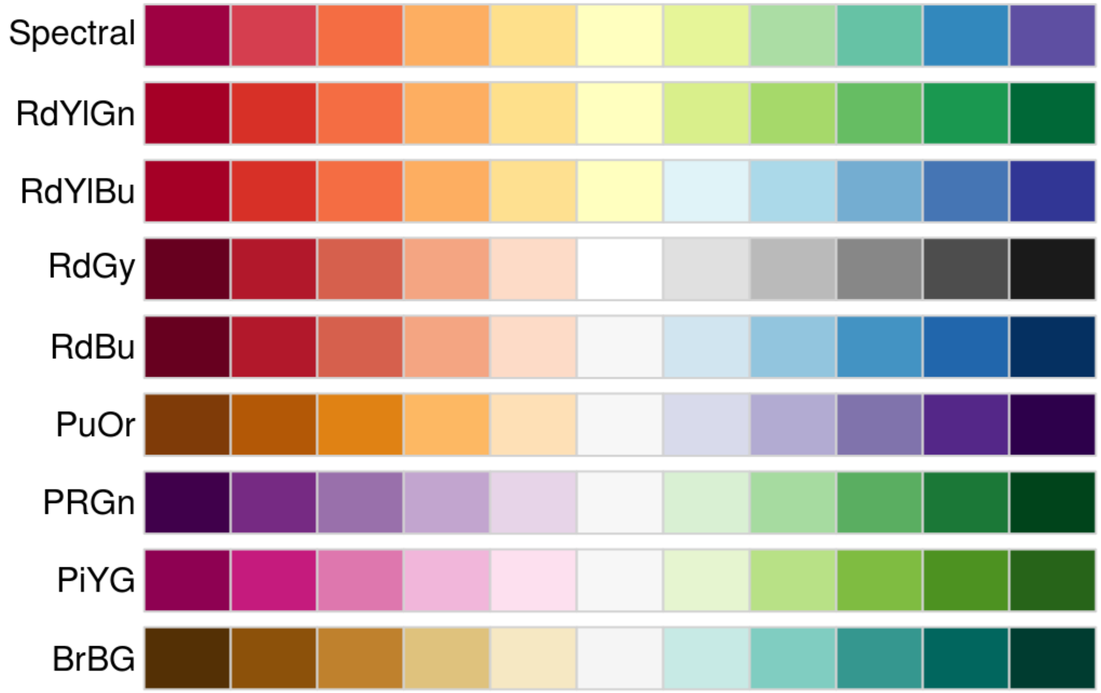
## sequential



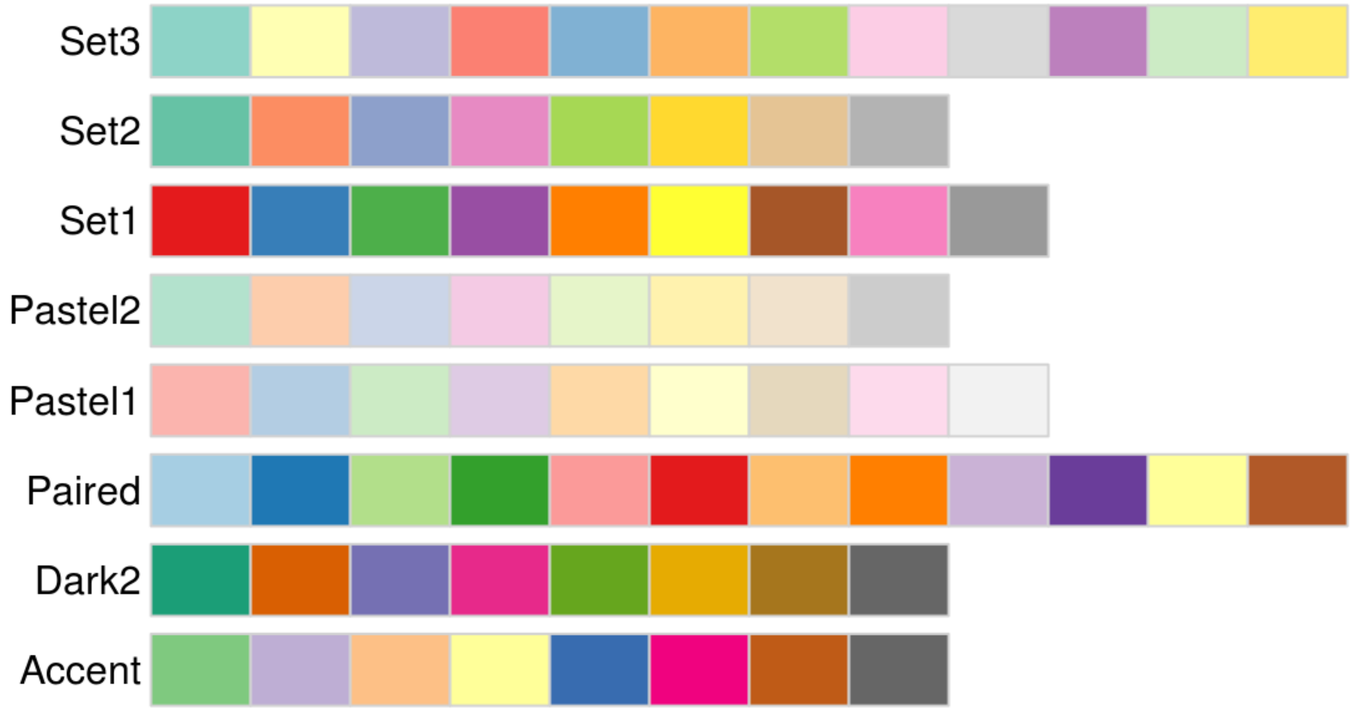
# RColorBrewer Color Schemes

## diverging



# RColorBrewer Color Schemes

## qualitative (for categorical data)



# Viridis Color Schemes

## viridis

# Continuous data

VIRIDIS

+ scale_color_viridis()

OR: _fill_

RCOLORBREWER

+ scale_color_distiller(palette = "PuBu")

~~[+scale_color_brewer(palette = "PuBu")~~: Error: Continuous value supplied to discrete scale]

~~[+scale_color_continuous(palette = "PuBu"~~) Error in f(..., self = self) : attempt to apply non-function]

CREATE YOUR OWN

+ scale_color_gradient(low = "white", high = "red")

+ scale_color_gradient2(low = "red", mid = "white", high = "blue", midpoint = 50)

+ scale_color_gradientn(colours = c("red", "pink", "lightblue", "blue"))

# Discrete data

VIRIDIS

~~+ scale_color_viridis()~~ Error: Discrete value supplied to continuous scale

+ scale_color_viridis(discrete = TRUE)

RCOLORBREWER

+ scale_color_brewer(palette = "PuBu")

~~[+scale_color_discrete(palette = "PuBu~~") Error in f(..., self = self) : attempt to apply non-function]

+ scale_fill_grey()

CREATE YOUR OWN

+ scale_color_manual(values = c("red", "yellow", "blue"))

# Color Vision Deficiency

approx. 8% of men, 0.5% of women have some form

missing or deficient cones:

protanopia (red)

deuteranopia (green)

tritanopia (blue)

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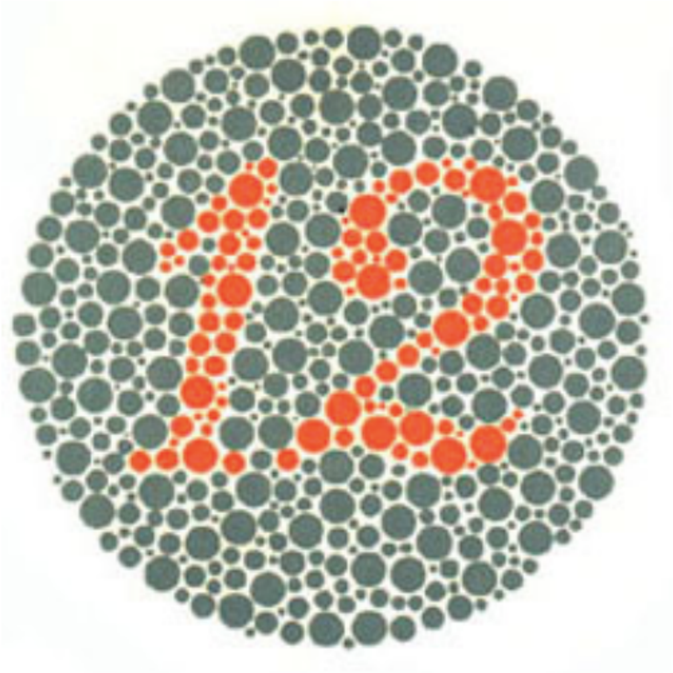
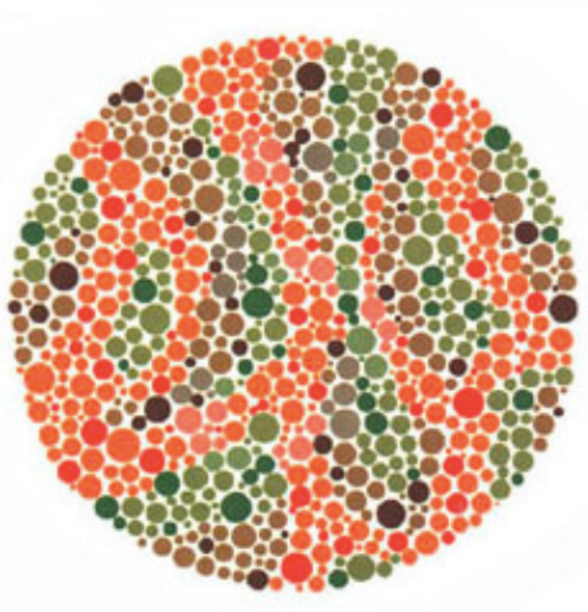
# Ishihara Test

tests for protonopia, deuternopia





http://unlimitedmemory.tripod.com/sitebuildercontent/sitebuilderfiles/ishihara38.pdf

# How to make CVD friendly graphs

Use palettes that have already been tested

(see viridis help)

Use a CVD simulator

www.vischeck.com

http://www.color-blindness.com/coblis-color-blindness-simulator/

Use high contrast