

# Image Color Spaces

# Color Space

- ▶ Typically, a color space is a 3D model to define a specified color
- ▶ Different color spaces present the color information in ways which makes certain calculations more efficient or,
- ▶ Because they provide more intuitive identification of colors
- ▶ For example:
  - ▶ RGB: more intuitive for color viewing by eye
  - ▶ HSV: more convenient for separate color & intensity processing

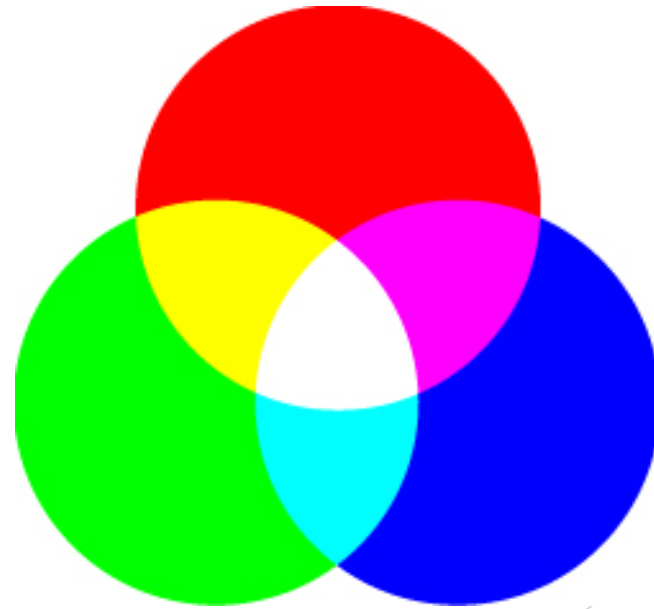
# Greyscale Color Space

- ▶ Value of each pixel carries only intensity information
- ▶ Can result in black & white images, or
- ▶ Composed of various shades of grey varying from white to black



# RGB Color Space

- ▶ The simplest color space for color perception
- ▶ Axes: Red, Green, Blue



# HSV Color Space

- ▶ It separates intensity information (luminance) from color information (chrominance), thus
- ▶ Allows for processing on either of color or intensity components

