**How to pick color in Visualization (mostly DataVis)**

The following paragraphs are subject to constant modifications and are deemed as guidance rather than explicit recommendations.

**Primarily influenced: https://blog.datawrapper.de/beautifulcolors/**

Chart, bar chart

Description automatically generated**Starting point:**

1. A picture containing map

   Description automatically generatedcategorical data (bar-, line charts)?
2. Sequential data (gene expression, heatmap)?
3. How many features to display?

If there is no DataVis inspiration whatsoever:

<https://infographics.economist.com/2019/AChristmasGiftForYou/AYearInGraphicDetail.pdf>

https://github.com/Z3tt/TidyTuesday

<https://multimedia.scmp.com/culture/article/SCMP-printed-graphics-memory/>

**General RULES:**

* Use warm colors & blue
* Avoid bright, saturated colors (outer ring of color wheel)
* Light colors for **low values** AND darker values for **higher values**
* Work with highlighting-/de-emphasizing (grey to diminish attraction)

**Color schemes:**

**Hue:** ranges from 0 – 360 degree (outer ring of color wheel)

**Saturation:** 0 (grey) to 100% (super-duper colorful)

**Brightness:** 0 (black) – 100 (the actual color)

<https://www.sessions.edu/color-calculator/>

<https://color.adobe.com/create/color-wheel> (**good alternative**)

<https://paletton.com/#uid=1000u0kllllaFw0g0qFqFg0w0aF> (alternative)

* Select base color (outer ring of color wheel for hues)
* Select harmony (avoid tetradic)
  + Complementary is good choice to start
* Change saturation and brightness (radius of color wheel)
* See results

Colors in R:

Work either with HEX code (#6-digits) or (#8-digits) where last two value limit saturation)

Useful color palettes: viridis

Examples:

1. Chart, line chart

   Description automatically generatedCategorical:
2. #15607A (bluish)
3. #09BB9F
4. #FFB55F (yellowish)

**Note:** be careful with the background

1. Diverging:
2. A picture containing chart

   Description automatically generated#15607A (bluish) –
3. #A63716 (redish)
4. (midpoints):
   1. #7495A6
   2. #C7CDD1
   3. #CC734D

Other examples:

Chart, line chart

Description automatically generatedChart, bar chart

Description automatically generated

Chart, histogram

Description automatically generatedA picture containing timeline

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