**Data Visualization Checklist**

|  |  |  |
| --- | --- | --- |
| **Guideline** | | **Rating (2, 1, 0, N/A)** |
| **Graph Elements** | Provide a descriptive title, axis labels and explanatory annotation, legend if needed. Text size should be readable. |  |
| Plot type should be appropriate to represent relationships in the data and deliver the intended messages. |  |
| Data should be displayed in an order that makes logical sense. |  |
| No more than 20 stimuli (i.e. shape, color, brightness) in a single plot for visual elements to be distinguishable. |  |
| Avoid splitting one representation into multiple windows. |  |
| **Use of Colors** | Use red and green in the center of the view. Use black, white and yellow in periphery. |  |
| Use colors for highlighting and grouping, keep in mind that less is sometimes more. Also be mindful of the issue with colorblindness. |  |
| Don’t use high saturation, spectrally extreme colors together. |  |
| For large regions, don’t use highly saturated colors (pastels would be a good choice). |  |
| **Tufte’s Integrity Principles** | Provide clear, detailed and thorough labeling to avoid scale distortion and ambiguity. |  |
| Graphical representation of numbers (as measured on the graph) should be directly proportional to numerical quantities represented.  0.95 <= Lie Factor <= 1.05 |  |
| Show data variation, but not design variation. Avoid unintended size coding. |  |
| **Tufte’s Design Principles** | Maximize data-ink ratio (non-data ink: scales, labels, edges) |  |
| Avoid chart junk (i.e. unnecessary gridlines, redundant background color and display frames) |  |
| Use multifunctioning elements (i.e. scented widgets, interactive legend) |  |
| Maximize data density (shrink graphics, maximize amount of data shown) |  |
| **Total Score** |  |  |

Reference:

Data Visualization Checklist by Stephanie Evergreen & Ann K. Emery (May 2016), <http://stephanieevergreen.com/wp-content/uploads/2016/10/DataVizChecklist_May2016.pdf>