**Plots Checklist**

**Rating Description: 2** – all requirements were met; **1** – partial requirements were met; **0** – no requirements were met

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|  | **Guideline** | **Rating** | | | |
| **Category** | **Description** | **2** | **1** | **0** | **N/A** |
| **Tufte’s Principles**  Main Principle for plotting. | **Tufte’s Design Principles**  Maximize the Data-ink Ratio, avoid char junk, multifunctioning elements, layering & Separation, Maximize the data density |  |  |  |  |
|  | **Tufte’s Integrity Principles**  Missing scales / scale distortion, Distortion.  Clear, detailed and thorough labeling should be used to defeat graphical distortion and ambiguity. |  |  |  |  |
| **Arrangement**  Good arrangement makes the data visualization easy to understand. | **Data order**  Data should be listed in order intentionally. The order could be frequency counts, groupings, bins, time period, alphabetically, etc. |  |  |  |  |
|  | **Proportions are accurate**  Bar charts starts axes at 0, other graphs have a minimum and maximum scale that reflects what should be an accurate interpretation of the data |  |  |  |  |
|  | **Axis intervals are equidistant**  The spaces between axis intervals should be the same unit, even if every axis interval isn’t labeled. |  |  |  |  |
| **Text**  One important part for additional information of plots. | **Text size is hierarchical and readable**  The text size order should be like following (from large to small), Titles, subtitles or annotations, labels, axis labels, source information. The smallest text axis labels are at least 9-point font size on paper, at least 20 on screen. |  |  |  |  |
|  | **Data are labeled directly**  Position data labels near the data rather than in the separate legend. |  |  |  |  |
|  | **Labels are used Sparingly**  Focus attention by removing the redundancy. |  |  |  |  |
| **Color**  The most important component of plots. | **Color is legible when printed in black and white**  Audience would able to tell the patterns in the data, even plots were printed black and white. |  |  |  |  |
|  | **Color is used to highlight key patterns**  Action colors should guide the viewer to key parts of the display. Less important, supporting, or comparison data should be a muted color, like gray |  |  |  |  |
|  | **Text sufficiently contrasts background**  Black/very dark text against a white/transparent background is easiest to read |  |  |  |  |
| **Overall**  Connection between data and plots. And other internal components. | **The chart type is appropriate for data**  Data are displayed using a graph type appropriate for the relationship within the data. For example, change over time is displayed as a line graph, area chart, slope graph, or dot plot |  |  |  |  |
|  | **Plots highlights significant finding or conclusion**  Plots should have a practical or statistical significance to warrant their presence. |  |  |  |  |
|  | **Individual char elements work together to reinforce the overarching takeaway message**  Choices about graph type, text, arrangement, color, and lines should reinforce the same takeaway  message. |  |  |  |  |
| **Overall Score:** |  | | | | |