Northeastern University

EECE 5642 Data Visualization

Homework 2
Instructor: Y. Raymond Fu
Due Date: **11:59pm Feb. 13**
Submission: Canvas

1. Visualization Design (30/100)

In this part, you will find a bad design of a visualization work (e.g. chart, figure, graph, etc.) from internet. Please use the principles, theories, and tips we learned from the class to analyze this work. Make sure the lie factor, data-ink ratio, and Tufte's principles are all used in your analysis for the minimum requirements. Please suggest your new design to improve this work and show your results by any tools (e.g. Excel, Photoshop, Matlab, Power Point, Illustrator, etc.), or, draw by hand and take a photo or scan.

Hint: http://junkcharts.typepad.com/ is a good resource.

2. Color (25/100)

In this part, you are given an RGB color as [137, 56, 146] with R,G,B values in [0, 255]. Please scale the values to [0, 1] and calculate the corresponding color values in the CIE XYZ, CIE xyY, CMYK, HSV, and HSL spaces respectively. Please provide an image at arbitrary size to show this color. You can use any source codes, software, tools, or online demos to finish this part. But, you have to point out all the resources you have used.

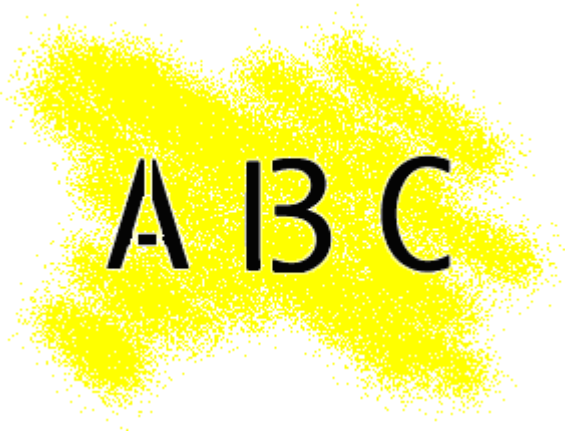
Hint: http://www.easyrgb.com/index.php?X=MATH or http://en.wikipedia.org is good reference.

3. Table & Graph (25/100)

In this part, you will analyze and visualize the dataset attached to the assignment. The dataset describes the statistics of paper acceptance rate for the main AI conferences. Please provide visualizations of the data using at least one table and one graph. You may compare the different visualization results and explain the pro and con of using tables and graphs. (You can use only partial of the data.)

4. Visual Perception and Cognition (20/100)

In this part, please answer the questions from the view of visual perception and cognition. What you can tell from the following two figures? What is the similar part and what is the difference? Why this can happen?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