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Data Analysis and Visualization /ACCA4002/

Assignment 1

/"Where is Coronavirus Rising & Falling?" – Infographic Report/

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1. Introduction

First of all – what is an infographic? The word infographic is used by people to mean many different things. In many cases infographics and data visualizations are considered synonymous, but in the world of an infographic designer they mean different things. Data visualizations are the visual representations of numerical values. Charts and graphs are data visualizations and create a picture from a given set of data. Whether it's a new definition or an additional definition of the term infographics, its use now implies much more than just a data visualization. Up until recently, a common definition for infographics was simply “a visual representation of data”; however, that definition is outdated and is more indicative of data visualizations. Originally derived from the phrase information graphics, infographics was a term used in the production of graphics for newspapers and magazines.

Today, the use of the word infographics has evolved to include a new definition that means a larger graphic design that combines data visualizations, illustrations, text, and images together into a format that tells a complete story. In this use of the word, data visualizations by themselves are no longer considered to be complete infographics but are a powerful tool that designers often use to help tell their story visually in an infographic. [1]

What makes an infographic “cool” and understandable? In his book, Randy Krum gave a long answer stating that a “cool” design is a combination of a number of aspects, including an engaging topic, new and/or surprising information, visually appealing and distinctive, simple and focused message, quick and easy to read, easy to share, clear and easy to understand data visualizations, and last, but not least - credible data sources.

2. Message

Good infographic design is about storytelling by combining data visualization design and graphic design. Many of the good infographics follow a simple three-part story format: introduction, key message, and conclusion.

In this case, the infographic's introduction contains the title, shown in a higher font size compared to the sub-section, with colorized words – “rising” marked in red and “falling”, marked in blue. The title is accurate, as it introduces the reader with the topic. The sub-section is describing what the data shows: the average percentage change in weekly cases. There is also a date on the right side

showing when the infographic was last updated. Overall, the introduction of the infographic has laid the foundation of the information perfectly.

The “key message” of the infographic is seen to be a bit hard to understand, because it has some data that is expressed with line, ending with a missing country, or overlapping text above multiple lines with a similar end. Therefore, the viewer cannot make the best out of the infographic.

Typically, Infographic designs need to have some closure at the bottom where the designer wraps up the message for the reader—just like ending a good speech. In this case, the conclusion part is missing. Also, there is no source link on the infographic itself, which means – the data could be coming from an unreliable source. (the link is only in the document provided for the assignment)

3. Design

3.1. Color

The colors that were chosen are relevant to the data, as red, most of the times indicates danger, and light blues are often perceived as relaxed and calming [2]. Selected colors also have made reading online easy and not eye-straining, but most of the times, having dark-colored background style makes an infographic resume hard to print. Even if they have a color printer available, many recruiters will avoid printing out a resume with a black background for fear of how much printer ink or toner it would use.

3.2. Font/Text

The font of the text is appropriate, as it is readable and in a proper font size. If the designer used a lower font size, that would probably solve the problem of not showing all of the country names, but another one would occur – font size would be so small that it could become hardly readable.

3.3. Graphs and graphics

“Of all methods for analyzing and communicating statistical information, well-designed data graphics are usually the simplest and at the same time the most powerful.” [3] is a quote from Dr. Edward R. Tufte - one of the pioneers of modern data visualization and professor emeritus of political science, statistics, and computer science from Yale University. The graph we are reviewing is both simple, and not that simple at the same time but it has its pros and cons.

On one hand, the graph shows both positive and negative average percentage at the same time, giving a broader view of how the percentage moves around in different countries. The x-axis indicates both sides – the decreasing side on the left (in blue color) and the increasing side on the right (in red color). This makes the graph easy to read and suitable for this type of data.

On the other hand, there are no in-between values and each time a person wants to see the percentage of a given country, they have to trace it down to the x-axis, and if it's not (like most of the times) on a dashed line, the person can easily be mistaken. Other than that, the placement of the country names is inconsistent, and cannot be used to decide for which country the graph is showing the data. As mentioned before, there are overlapping graphics that don't provide information about what country its showing. The last thing I see as a con is that there is data going out of the graph's range and cannot be precisely determined. The graph doesn't raise any ethical issues.

4. Cognition

The mental modeling of the graph makes people think that there is a significant increase in Covid-19 weekly cases, as more information is shown on the right-hand side (the red side, that is showing an increase of the disease). Other than that, the right hand-side has another color which attracts the viewer's eye.

5. Improvement

I have some suggestions to improve the infographic. You can show the same data on a different graph, for example – a simple bar chart, or on a scatter chart with negative values included. For improvement on this graph, I would suggest firstly to experiment with different colors for printing solutions, make use of the Y-axis and add indications to it, make the graph broader so that more countries can be included (with the names shown), narrow the graph by merging similar graphic data, marking them with different colors and making a “legend” with different all of the countries.

6. References:

[1] R. Krum, *Cool infographics : effective communication with data visualization and design*, Indianapolis : John Wiley & Sons, 2014;

[2] C. Chapman, (2010 January 28), *Color Theory for Designers, Part 1: The Meaning of Color* [Online], Available: <https://www.smashingmagazine.com/2010/01/color-theory-for-designers-part-1-the-meaning-of-color/> ;

[3] E. R. Tufte, *The visual display of quantitative information*, 2nd ed. Cheshire, Conn.: Graphics Press, 2001;