

Data Visualization- CA2

What's about coffee: An Infographic report

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1. Background

The infographics is based on the insights about the Coffee. To represent the infographic different visualizations are used based on the datasets from different sources. Data is taken from the international coffee organization and Statista. The data is open source which provides the historical information on the coffee consumption, import and export of coffee worldwide. Other dataset used is taken from the Kaggle which is Starbucks nutrition-based menu and Starbucks locations worldwide dataset. The data has many variables to analyse and develop the visualizations.

In the next section, outline of the process how infographic is developed, specification of the visualizations and the information to generate those visualizations, justification of the layout, technique, colour and the charts used, technologies used to develop the infographics will be discussed.

2. Process

Combining the visual story with the presentation of the data is the key aspect in the infographics. Below are the steps followed to develop informative infographic.

- I. Data Collection- This is the important step to form the responsive and interesting story for our topic. Story is discovered from the data to grab the attention of the audience we target.
- II. Purpose and audience- The visualizations designed to present the story about the coffee, with the aim of providing insights about coffee in terms of the nutrition, overall increase/decrease in demand, supply and availability.
- III. Structures- A good informative graphic is dependent on the clear structure. The structure represents the organization of data and control flow of the story. As different categorization of data requires different types of visual designs. A good structure delivers clarification and highlights the key results. Too complex structure makes audience difficult to understand what data is showing.
- IV. Data Visualization- Necessary data cleaning needs to be performed prior to the visualising the data. With common charts like pie, bar; data is presented in the most accessible format. Microsoft excel is used to create the clustered column charts and tableau is used to create the pie chart. Labels should be added to the visualizations to provide the right details and highlight important findings about the data.
- V. Making the infographic- Creating relevant artwork from the data with the utilization of colour, icons, images is prominent. After making the visualizations and graphics; distributing these in the infographics is the major task [1].

3. Specification

This involves the designing of the infographic layout on the Piktochart tool. The infographics is divided into block. Each block helps to understand more about the topic.

- I. Layout- The size of the page is set to 3508px * 4961px (pixels) which is standard for the A3 paper. The background image for the main content area is selected as the wood floor as it complements the colour of 'Coffee'.
- II. Colour- Colour shows the richness and quality of the content. The black colour is used for the graphics to support the information to make it clear and attractive. Even in the visualizations created, colour is selected in the brown scale to maintain the uniformity of the colour throughout the infographics. Colour blindness is also considered while deciding the colour of the layout, visualizations and texts. Online colour blindness simulator [6] is used to test the visualizations created whether they are accessible for the people who have colour blindness.
- III. Graphics- Piktochart provides lots of graphics related to the topic 'Coffee', so the relevant graphics are added to make the infographics interesting for the readers.

When it comes to the title, primary aim of it is to give the readers fair idea about what they will see. Title for the infographics is given accordingly i.e. 'What's about Coffee' will make readers aware of the topic and make them curious to what they are about to see. When it comes to headlines, David Ogilvy who is the father of advertising stated, 'five times of people read the headlines as read the body copy. Writing the headlines is like spending eighty cents out of the dollar' [7]. So, the headlines are chosen appropriately.

In this infographic, the story about coffee is divided into three parts i.e. Coffee & Nutrition, Coffee & trading and Coffee & consumption. All the parts provide the information with supporting data visualizations. The parts are as follows:

- I. Coffee and Nutrition- This section helps audience to absorb the importance of coffee in terms of the nutrition. With the help of area chart which shows the volume of the contents, one can choose the type of the coffee as per the need of the nutrition.
- II. Coffee and Consumption- When it comes to consumption, the country having the highest consumptions will have more options for the trying out new cafes and their brewed coffees. Pie chart provides information about the top coffee consuming nations.
- III. Coffee and Trading- Some insights about where the coffee is produced and where the most demand is, is visualized in this part. From 2013- 2017 how much did the import/export increased globally can be depicted by user with the help of chart.
- IV. Coffee Shops- Most People prefer things which are available nearby. And when it comes to the coffee people favour the nearest cafes. As Starbucks have most number of cafes in the world, the cities having the Starbucks are plotted on the world map to show the Starbucks network.

In data visualization, captions, legends, chart labels are as important as the actual information. The readers must be able to interpret the charts. So, considering these, added the proper axis labels, legends and captions to all the visualizations. To bring out the main insights and conclusions from the chart, captions are added for the visualizations. Andy Kirk's principles on the good visualization design i.e. trustworthiness, accessibility and elegance are also considered.

4. Justification

- I. Pie Chart- Pie chart is used to show the consumption of coffee in litres for different countries. Pie chart shows the contribution by slicing according to the volume and makes it easy to understand. Pie chart are best way to show the data if there are fewer categories [2].
- II. Clustered Column Chart- This chart displays the data series in the vertical columns. The vertical columns are clubbed together by categories. This chart is suitable to show the changes between different data groups. In this visualization, clustered column chart is used to present the import and export of the coffee for the major countries. Annual growth rate is presented by line over the columns [3].
- III. Stacked Area Chart- This chart is best suitable to show how each part contributes to the total. Major contents like caffeine, carbohydrates, sugar, calories in different types of coffee are presented using this chart [4].
- IV. Tableau embedded map- Tableau generates the geographical coordinates to plot the world maps. The dimension, measures and attributes are added to produce the visualization. In our infographics, the Starbucks café network is shown using the map. The cities having Starbucks cafés all over the world are rendered on the map and country wise differentiated by colour.

5. Technologies

- I. Tableau- Tableau is used to make interactive visualizations which is the important part of understanding the data. It is used for most of the visualizations. To be specific, the world map which is embedded in tableau is used to display the Starbucks café in all the cities in the world. Pie chart is also created to show the top coffee consuming countries.
- II. Microsoft Excel- Excel is used to create the clustered column chart to show the import and export of the coffee and the overall increase/decrease percentage in it.
- III. Power BI- Power BI is used to create the area chart to present the contents of the different types of coffees i.e. sugar, caffeine, carbohydrates and cholesterol; filled with colour to indicate the volume of each.
- IV. Piktochart- To develop the infographics, Piktochart is used. Shapes and icons, images, lines embedded, and text frames are used to make the most of the infographic. As colour is the vital part of the infographic, the colour scheme for tableau, excel is adjusted accordingly. A3 dimension is set to create the infographic.

6. Reflection

The web-based tool used to develop the infographic is Piktochart. It allows users to create infographics and visuals using the different templates without having the thorough experience as graphic designer. The templates are not only for the infographics but for reports, presentations, flyers and reports as well. The tool has lots of various animation icons, photos, photos frames, shapes and icons.

Developing an infographic was not as easy as it seems. There were lot of difficulties in building it. Firstly, Visibility and alignment were important as the size of the infographics was A3. The most difficult part was calibrating the colour scheme. As the topic is 'What's about Coffee', the adjusting coffee colours in all the visualizations, text, icons and background photos was time consuming. Arranging the shapes and icons according to the story was tedious job. But

there were lots of related shapes, icons available for 'Coffee' which made the presentation easy. In the end consistency has to be taken into the account to depict the story which was quite the stress.

The visualization made from tableau and excel, and the icon/image used to support the visualization are added. The main motivation behind the infographics is to show the insights about 'Coffee' in terms of nutrition, trading, consumptions and availability over the world and why coffee can be preferred.

References

1. <https://www.creativebloq.com/design/10-steps-creating-perfect-infographic-3145672>
2. <https://www2.le.ac.uk/offices/ld/resources/numerical-data/pie-charts>
3. <https://exceljet.net/chart-type/clustered-column-chart>
4. <https://study.com/academy/lesson/what-is-an-area-chart-definition-examples.html>
5. <https://create.piktochart.com/dashboard>
6. <https://www.color-blindness.com/coblis-color-blindness-simulator/>
7. <http://blog.bradleygauthier.com/david-ogilvy-headline-copywriting/>

Data Sources

8. <https://www.kaggle.com/starbucks/store-locations>
9. <https://www.kaggle.com/starbucks/starbucks-menu>
10. <https://www.statista.com/statistics/277135/leading-countries-by-coffee-consumption/>
11. <http://www.ico.org/prices/new-consumption-table.pdf>