203RSAN-130-1DL : Data Visualization for Strategic Analytics

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Week 6 Discussion

For Monday

For Monday
by Ross Morrone - Thursday, 13 August 2020, 8:31 AM

In this week's topic note there are several web-based data visualization tools showcased. Choose one of the provided web-based tools and explore its functions. Explain what type of visualization the tool provides and explain how it can be used in a business environment. What type of data would best be used for this particular tool?

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Re: For Monday
by Ntembeko Cavanaugh - Monday, 24 August 2020, 9:27 AM

Choose one of the provided web-based tools and explore its functions. Explain what type of visualization the tool provides and explain how it can be used in a business environment. What type of data would best be used for this particular tool?

TimeToast is an online data visualization tool for timelines (Morrone, 2020). It is used to “create stories that show dramatic developments over time, whether they relate to global, local, or even personal histories”. TimeToast requires chronological data (events and dates) and for context, one can upload pictures and narrative. The tool’s interactive feature enables one to explore a particular event in detail, view all events in a vertical layout format that only shows the chronological order without regards to the time gap in between events as well as a traditional timeline that space out events based depending on where they fall in the time scale which can be from BC to AD or a particular time period.

While TimeToast can be used to depict personal stories for reflection and self-awareness, it is generally used as an educational tool to help students “learn sequence, growth, change, and effective visual communication (Common Sense Education, n.d.)”. TimeToast has libraries of different timelines for different categories including politics, biographies, film, music, etc (TimeToast, n.d.). Businesses can use the tool to superimpose their events on existing timelines to understand the correlation. For example, the movement of the stock market can be checked against world events like wars, political unrest, etc. TimeToast enables one to share not only past events but also future events (TimeToast, n.d.) and this can enable organizations to create a roadmap showing milestones on a timeline for the future they aspire to have and this could be a simple as project plans or strategic goals.

Figure 1 below shows historical events from 1750 up to and including 1980 though it states up to “present”. It is warned that public timelines should be checked for accuracy before use as their quality can vary widely and to ensure quality, one might want to use a paid option which enables them to share curated timelines with a subset of users who can collaborate on it (Common Sense Education, n.d.). The other issue with TimeToast is that when capturing an event, one can only specify one date and not a range (time period) and that prevents one from seeing overlaps for events covering a period of time e.g. world wars, revolutions, etc.

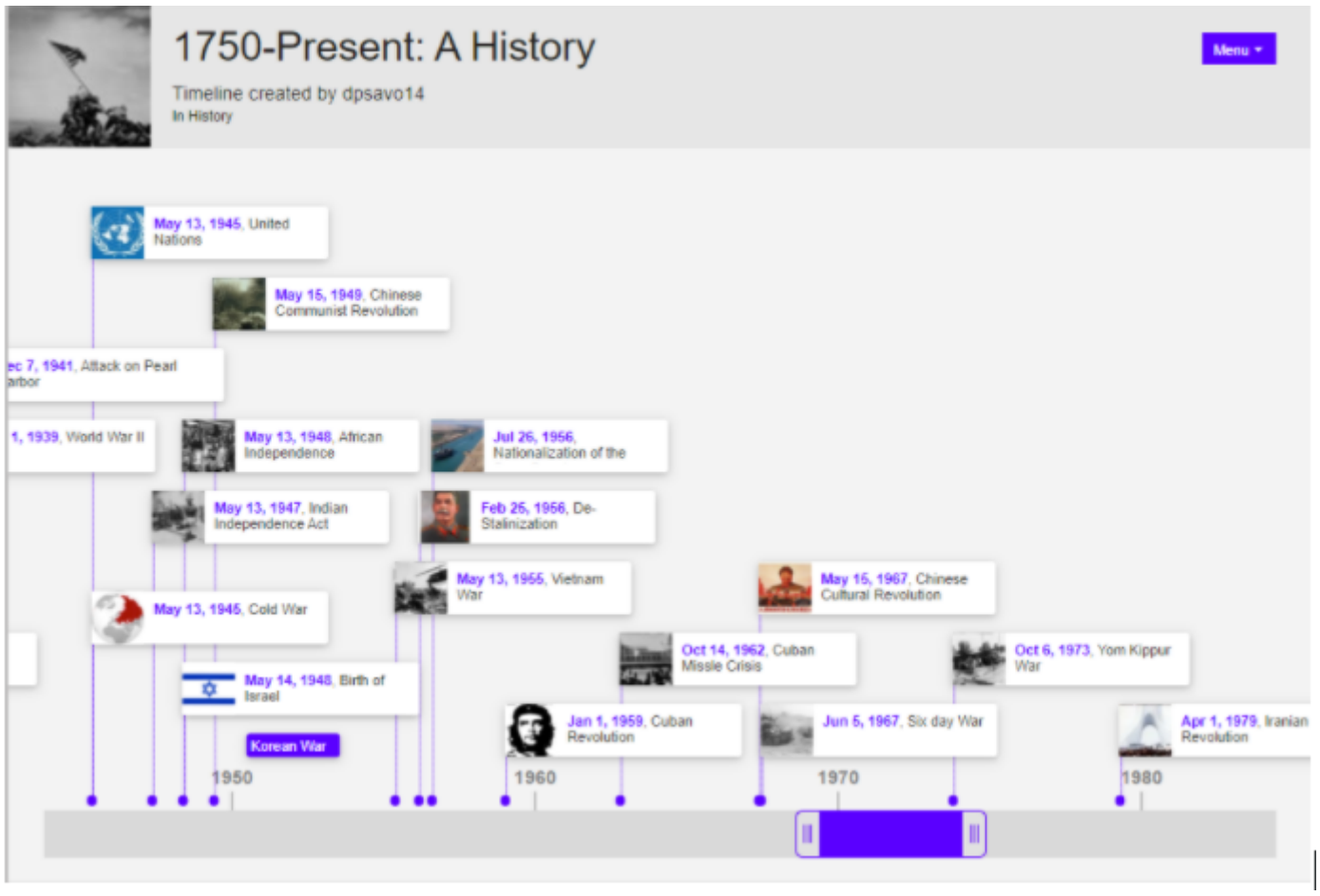

Figure1. Public history timeline from 1750 to the present. Reprinted from TimeToast: History. By TimeToast (n.d.). https://www.timetoast.com/timelines/1750-present-a-history

- Morrone, R. (2020). W06T1_Choosing the Right Data Visualization Tool.https://moodle2.brandeis.edu/mod/folder/view.php?id=1115849
- Common Sense Education (n.d.). TimeToast https://www.commonsense.org/education/website/timetoast
- TimeToast. (n.d.). Make a timeline tell a story.

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Re: For Monday
by Dax Cabell - Monday, 24 August 2020, 11:29 AM

"The most common tool for data visualization is a simple chart or graph..." (Topic Notes)

The question for this week's instantly made me think of my new/used Garmin Watch, the Forerunner 45. For 6 years, I have been running with the Forerunner 15. It has been a great watch for my needs for a very long time. My Garmin Forerunner 15 could be connected to the PC via USB to sync data into the Garmin Connect website. It would give me all of the stats and data related to my activity. So cool! The Garmin watches have come such a long way from this. Now, with my new to me, old-newer edition, I'm again blown away by the technology.

Whenever I run now and come in the house, it automatically syncs the run to my iPhone via Bluetooth. All of the data is in the Garmin Connect app ready for me to view and analyze. So many stats that it is a data lovers dream. Tracked are activities, heart rate, stress level, steps, calories, time, distance, pace, weather, and an automated map of where I ran and the route I took! I haven't scratched the surface on this thing.

For this week, I'm choosing Google Fusion Tables. When Going to the website, https://support.google.com/fusiontables, and selecting Visualize, the options for Interactive charts most resembles the statistics I can see from my Garmin watch. Fusion Tables Labs, Network Graph, Zoomable line chart, Map chart and Scatter plot are all represented in the Garmin Connect app. "Fusion Tables is an experimental data visualization web application to gather, visualize, and share data tables." (https://support.google.com/fusiontables) With fusion tables you can summarize a large amount of data and then customize the

chart, graph or layout. From there you can embed and combine into visualizations and share the data. The visualizations are able to be embedded into data so that the tables can update in real time. Fusion tables also works as a maker's space. Users can be linked to the data without downloading it and extract and manipulate the data suited to their needs.

In a business environment, I could see this being used in transportation services or anywhere that dispatches. Locations can be pinpointed through heatmaps and icons, inventory and supplies graphed, demand for shipments charted, and efficiency with timing and routing using real time data. From this rather lengthy but helpful YouTube video from Kurt Gessler, he shows making a table map visual using Google Fusion Table. With imagination you can see this working for many organizations. Google Fusion Tables uses KML (Keyhole Markup Language) an XML notation for mapping. Users are not responsible for creating the maps but use maps or open data portals that are already in place. Google Fusion Tables are really for the visualizations of the data.

References:

Morrone, R. (2020). W06T1_Choosing the Right Data Visualization Tool.https://moodle2.brandeis.edu/mod/folder/view.php?id=1115849

Google Fusion Tables, https://support.google.com/fusiontables

Gessler, Kurt, Using Google Fusion Tables to create data maps with polygons, https://youtu.be/0SLyS4-zGeo

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Re: For Monday
by Graham Waters - Monday, 24 August 2020, 5:34 PM

In this week's topic notes, there are several web-based data visualization tools showcased. Choose one of the provided web-based tools and explore its functions. Explain what type of visualization the tool provides and explain how it can be used in a business environment. What type of data would best be used for this particular tool?

Leaflet

The beautiful thing about Leaflet is that its applications have no end. There are a million ways that many different companies could use their mapping service. It provides companies with an easy way to incorporate maps into their interactive applications as well

Mobile-Friendly Maps

One of the most useful functions that Leaflet has to offer is its mobile-friendly map integration. Mobile maps have become ubiquitous in our culture and highly necessary for different apps. Leaflet maps work seamlessly on phones ("Plugins - Leaflet - a JavaScript library for interactive maps", 2020). They also offer many different plugins that provide a tremendous amount of customizability for developers that want to use their service.

Leaflet Realtime Plugin

Another useful plugin is called Realtime. This allows developers to add in GPS tracking data as well as remote sensing capabilities, which is highly beneficial for researchers or even factory management, for example ("Plugins - Leaflet - a JavaScript library for interactive maps", 2020).

Leaflet Indoor Mapping

Leaflets indoor mapping plugin is the perfect tool for companies that want to map out their offices and optimize the space ("Plugins - Leaflet - a JavaScript library for interactive maps", 2020).

Data best for Leaflet

Because it deals with maps, the best data for Leaflet is likely geospatial data. This includes coordinates, addresses, and routes. Additionally, there may be some use for regional statistics for areas or businesses that could add insight when combined with the Leaflet platform. From Leaflet, analysts can derive travel speeds, shortest path calculations, graph optimizations, and

possibly marketing strategies or collaboration opportunities with local businesses.

Uses in businesses

Leaflet's GUI provides an excellent medium for interactive business presentations, network modeling for distributors or suppliers, research on markets in market areas, and even route optimization for employees or trucks. Finally, many businesses have used Leaflet by integrating it into their mobile applications and websites.

References

Leaflet — an open-source JavaScript library for interactive maps. (2020). Retrieved 24 August 2020, from https://leafletjs.com/

Plugins - Leaflet - a JavaScript library for interactive maps. (2020). Retrieved 24 August 2020, from https://leafletjs.com/plugins.html

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◄ For Saturday

◄ Article: The Evolution of Data Visualization

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