Search Trends

Final Report - Data Visualisation

University of Twente Creative Technology 08-06-2020

Team: Internet

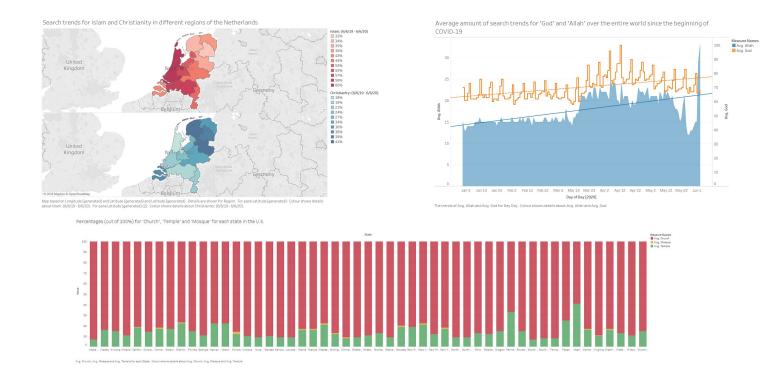
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Introduction

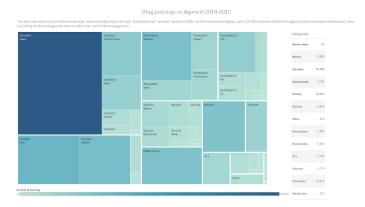
For this final assignment for Data Visualization, our topic of interest was initially the Internet. After having considered different sub-themes that could be used in order to visualize the Internet, we decided to pick search trends (on the Internet) as our main theme. In the following report, fifteen different visualisations will be shown, which all are linked to the main theme. Five different sub-themes were thought of, and for each sub-theme, three data visualizations have been made. The sub-themes that were used for these data visualizations are: religion, the dark web, impactful events, activism and products. In the following chapters, all data visualizations will be shown and explained shortly.

Religion



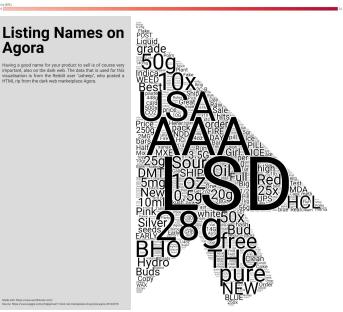
All three data visualizations that are shown above were made on the basis of datasets that were obtained via Google Trends. Since 'Search Trends' is our main theme for this final assignment for Data Visualisation, I have decided to use Google Trends as a source for the data sets used. Google Trends, which is a feature of Google, allows you to find accurate data about search trends all over the world, on all possible subjects. In order to make the visualizations for the 'Religion' sub-theme, different search trends with regard to different religions, places and timestamps were used.

Dark Web



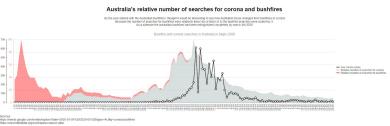
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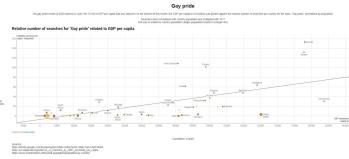
In the data visualisation above, the amount of posts related in the category drugs are represented in this visualisation. The dataset that is used for this comes from kaggle.com. This is a dataset that was leaked by a reddit user that goes by the name of "usheep", who threatened to expose all the vendors on Agora, unless they met their demands of sending him a few hundred dollars. He ended up posting his HTML rip, and was never heard from again. Agora was shut down a few months after, without anyone knowing whether usheep had anything to do with this.



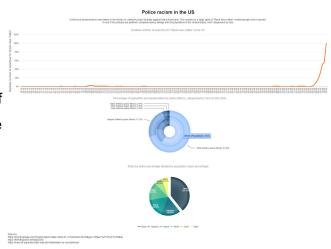
The dataset that usheep leaked contains over 100,000 items that were on sale on Agora. Since this dataset is so humongous, this was the only dataset that was used for this sub-topic, since a wide variety of visualisations could be made from this single dataset.

Impactful events

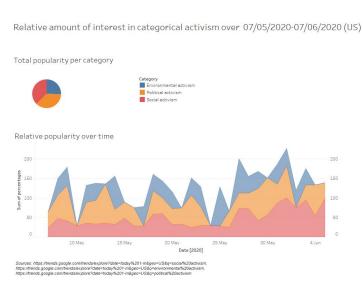


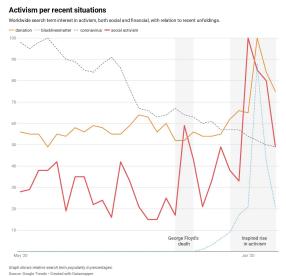


Most of the datasets used were taken from google trends. This shows the relative popularity of a given search trend in a given time frame. With 100% being peak popularity. The dataset regarding the number of corona cases was taken from ourworldindata.org The "killed by police" dataset was found on the library website from Princeton University and therefore can be assumed to be correct. Additional datasets about population of countries (number of inhabitants and distribution per race) were taken from kff.org and worldometer.info.



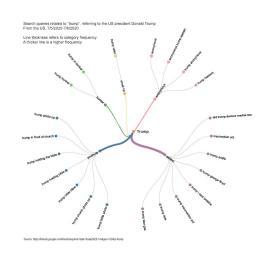
Activism





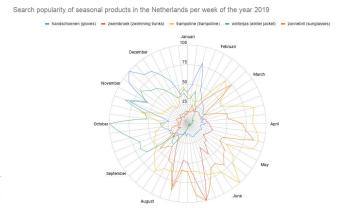
All data from these visualisations can be found on Google Trends. This data source provides relative popularity of search terms as a percentage. Furthermore, it provides insight in popular related search terms and related topics, as taken from Google Search requests of

the specified location and time frame. The popularity per category of activism and the activism related to recent situations are both visualisations of the relative popularity of the provided terms. The circular dendrogram is a visual categorization of search terms that are related to "trump".

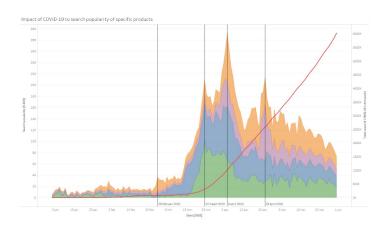


Products





The first dataset that was used was from Google Trends. Using search data we can analyse what people are interested in and foremost when. The time aspect can be used to look at impactful events like the corona crisis. Using a dataset regarding COVID-19 cases in the world, this is explained in a visualization made in Tableau. The search trends were also used to create a radar chart that gives a view of what products are popular



in which seasons of the year in the Netherlands. This visualization was made using Google Docs. Finally, a dataset from Statista about the impact of COVID-19 on E-commerce in the USA was used to visualize exactly this using Tableau.