CSCI:626/490: Human-Computer Interaction
Project1

Nischal Vooda

Introduction:

In today's tech-savvy world, information is all around us. We generate a plethora of textual data, alongside images and videos. For now, let's focus on textual information. There are various ways to represent text, such as XML, JSON, and CSV. The key is to structure the text effectively to derive more meaning from it. We use different structures for different purposes; for instance, we employ CSV for data exchange between software systems, JSON for unstructured data, and tables for data analysis.

Dataset:

We consider a dataset on carbon emissions spanning six years. This dataset is divided into four paragraphs and covers information from various sectors, including energy, transportation, and industry. However, it's not organized in a way that makes it easily understandable to humans. To make sense of this data, we've opted to present it in a table format. Our table has six rows, representing each year, and columns corresponding to different sectors. We've collected data related to the top sixteen sectors involved in carbon emissions from 2016 to 2021.

Implementation:

We've designed a webpage with two sections. On the left, we display the raw text, while on the right, we present the data in a table format. Sometimes, reading text provides valuable insights, and other times, comparing data is more efficient using tables. By placing the text and table side by side, we eliminate the need to constantly switch between the two. Additionally, we've implemented interactive features using JavaScript. When a user hovers over a particular section of the text, it highlights the corresponding cell in the table. This feature saves users a significant amount of time, as they no longer need to manually search for information in the table. Similarly, users can hover their mouse cursor anywhere on the table to quickly access relevant information from the text. This approach enables users to find related information effectively and save time. We've adhered to good software engineering practices, including code organization and comments, and have separated HTML, CSS, and JavaScript into distinct files.

Deployment and Software Quality:

To make our webpage easily accessible, we've deployed it on the Google Firebase hosting platform. You can access the website using the following secure URL: https://hci-project-1-64e08.web.app/ .This URL comes with an SSL certificate, ensuring that the website is secure through the use of the HTTPS protocol. We've followed best practices in software engineering by

maintaining code organization and including necessary comments. If the URL does not function as expected, please open the index.html file in a web browser to view the implementation.

Note:

Please Ctrl+ click on the link to access the website https://hci-project-1-64e08.web.app/

Website with white text

Nischal Vooda (Z-1985022) , Ajith Kalyan Chowdary Jarugula(Z-1966156) , Venkata Sai Pratheeksha Kanakamedala(Z-1972695)

This data is related to carbon Emission from 2016 to 2021 from different sectors we consider top 18 sectors from those Energy sector is in the top and Biomass Energy is in the last we will provide carbon emission in personage for every sector in each year As we already discussed Energy sector is the most carbon emission sector coming to the yearly data in 2016 70.0 % carbon emission in 2017 it is 70.3 % in 2018 it is 70.9 % in 2019 it is 71.5 % in 2020 it is 71.8 %and finally in 2021 it is 72.3 % coming to the transportation is in the second place with 15.0 % carbon emission in 2016 in 2017 it is 15.0 in 2018 it is 15.2 in 2019 it is 15.5 in 2020 it is 15.8 and finally in 2021 it is 16.2 . Comming to Industry in 2016 Carbon Emission is 5.4 %, in 2018 Carbon Emission is 5.5 %, in 2019 Carbon Emission is 5.6 %, in 2020 Carbon Emission is 5.7 and finally in 2021 Carbon Emission is 5.9 . Comming to Agriculture in 2016 Carbon Emission is 2.0 %, in 2017 Carbon Emission is 2.0 %, in 2018 Carbon Emission is 2.1 %, in 2019 Carbon Emission is 2.2 %, in 2020 Carbon Emission is 2.3 %and finally in 2021 Carbon Emission is 2.4 %.

Comming to Land Use Changes in 2016 Carbon Emission is 2.8 , in 2017 Carbon Emission is 2.8 , in 2018 Carbon Emission is 2.9 , in 2019 Carbon Emission is 3.0 , in 2020 Carbon Emission is 3.1 and finally in 2021 Carbon Emission is 3.2 . Comming to Residential and Commercial in 2016 Carbon Emission is 1.2 , in 2017 Carbon Emission is 1.2 , in 2018 Carbon Emission is 1.2 , in 2019 Carbon Emission is 1.3 , in 2020 Carbon Emission is 1.4 and finally in 2021 Carbon Emission is 1.5 . Comming to Fugitive Emissions in 2016 Carbon Emission is 0.8 , in 2017 Carbon Emission is 0.8 , in 2018 Carbon Emission is 0.9 , in 2019 Carbon Emission is 0.9 , in 2020 Carbon Emission is 1.0 and finally in 2021 Carbon Emission is 1.1 . Comming to Waste in 2016 Carbon Emission is 0.6 , in 2017 Carbon Emission is 0.6 , in 2018 Carbon Emission is 0.7 , in 2019 Carbon Emission is 0.7 , in 2020 Carbon Emission is 0.8 and finally in 2021 Carbon Emission is 0.9 these are the top eight carbon emissions sectors .

Now lets see the information related to Fuels and Transport coming to Fuel Combustion in 2016 Carbon Emission is 0.4 , in 2017 Carbon Emission is 0.4 , in 2018 Carbon Emission is 0.4 , in 2019 Carbon Emission is 0.5 , in 2020 Carbon Emission is 0.5 and finally in 2021 Carbon Emission is 0.6 . Comming to Industrial Processes in 2016 Carbon Emission is 0.4 , in 2017 Carbon Emission is 0.4 , in 2018 Carbon Emission is 0.4 , in 2019 Carbon Emission is 0.5 , in 2020 Carbon Emission is 0.5 and finally in 2021 Carbon Emission is 0.6 . Comming to Bunker Fuels in 2016 Carbon Emission is 0.1 , in 2018 Carbon Emission is 0.2 , in 2019 Carbon Emission is 0.2 , in 2020 Carbon Emission is 1.2 and finally in 2021 Carbon Emission is 1.3 . Comming to International Transport in 2016 Carbon Emission is 0.1 , in 2017 Carbon Emission is 0.1 , in 2018 Carbon Emission is 0.1 , in 2019 Carbon Emission is 0.1 , in 2020 Carbon Emission is 0.1 and finally in 2021 Carbon Emission is 0.2 . from Other Energy Industries in 2016 Carbon Emission is 0.1 , in 2017 Carbon Emission is 0.1 , in 2018 Carbon Emission is 0.1 , in 2019 Carbon Emission is 0.1 , in 2020 Carbon Emission is 0.1 and finally in 2021 Carbon Emission is 0.2 .

now let's maintain focus on Agriculture , water and soil from Water and Wastewater in 2016 Carbon Emission is 0.1 , in 2017 Carbon Emission is 0.1 , in 2018 Carbon Emission is 0.1 , in 2019 Carbon Emission is 0.1 , in 2020 Carbon Emission is 0.1 and finally in 2021 Carbon Emission is 0.2 . from Solvent and Other Product Use in 2016 Carbon Emission is 0.1 , in 2017 Carbon Emission is 0.1 , in 2018 Carbon Emission is 0.1 , in 2019 Carbon Emission is 0.1 , in 2020 Carbon Emission is 0.2 . from Agriculture Soils in 2016 Carbon Emission is 0.1 , in 2017 Carbon Emission is 0.1 , in 2018 Carbon Emission is 0.1 , in 2019 Carbon Emission is 0.1 , in 2020 Carbon Emission is 0.1 and finally in 2021 Carbon Emission is 0.2 . from Biomass Energy in 2016 Carbon Emission is 0.1 , in 2017 Carbon Emission is 0.1 , in 2018 Carbon Emission is 0.1 , in 2019 Carbon Emission is 0.1 , in 2020 Carbon Emission is 0.1 and finally in 2021 Carbon Emission is 0.2 .

Sector	Carbon Emissions (%) in 2016	Carbon Emissions (%) in 2017	Carbon Emissions (%) in 2018	Carbon Emissions (%) in 2019	Carbon Emissions (%) in 2020	Carbon Emissio (%) in 20
Energy (Electricity and Heat)	70.0	70.3	70.9	71.5	71.8	72.3
Transportation	15.0	15.0	15.2	15.5	15.8	16.2
Industry	5.4	5.4	5.5	5.6	5.7	5.9
Agriculture	2.0	2.0	2.1	2.2	2.3	2.4
Land Use Changes	2.8	2.8	2.9	3.0	3.1	3.2
Residential and Commercial	1.2	1.2	1.2	1.3	1.4	1.5
Fugitive Emissions	0.8	0.8	0.9	0.9	1.0	1.1
Waste	0.6	0.6	0.7	0.7	0.8	0.9
Other Fuel Combustion	0.4	0.4	0.4	0.5	0.5	0.6
Industrial Processes	0.4	0.4	0.4	0.5	0.5	0.6
Bunker Fuels	0.1	0.1	0.2	0.2	0.2	0.3
International Transport	0.1	0.1	0.1	0.1	0.1	0.2
Other Energy Industries	0.1	0.1	0.1	0.1	0.1	0.2
Water and Wastewater	0.1	0.1	0.1	0.1	0.1	0.2
Solvent and Other Product Use	0.1	0.1	0.1	0.1	0.1	0.2
Agriculture Soils	0.1	0.1	0.1	0.1	0.1	0.2

Website with Black text

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