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Visual Technologies 2

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# Final Project Paper Writeup

## Introduction:

The impact of climate change on our planet has become an increasingly important topic in recent years, and it is essential to understand the extent and consequences of this phenomenon. This data journalism project aims to showcase the annual global temperature and sea level changes resulting from climate change using a combination of data visualization and written content. The project explores monthly, seasonal, and yearly temperature changes as Celsius degrees (°C) between 1961 and 2019, with a yearly frequency of dissemination and release. The motivation for solving this problem is to raise awareness of the ongoing and alarming reality of climate change and encourage individuals and organizations to take action to address it.

## Related Work:

Prior research has been conducted on climate change, and many media outlets have reported on the topic extensively. The Boston Globe, ProPublica, and Grist are among the reputable media outlets whose journalists and other industry professionals provided insights for this project.

## Methods:

The project employs the scrollytelling technique to combine writing and visuals to increase interactions and engagement with the audience. R was used to explore the datasets and analyze

the data, while Adobe Illustrator was used for data visualization. JavaScript libraries such as D3.js, scrollama.js, and flickity.js were also used for creating interactive data visualizations. The narrative strategy was to present the data in a visually appealing and engaging way, drawing insights from interviews with a range of climate journalists and other industry professionals. The visual encodings employed included line graphs, bar charts, and interactive maps. This data-driven piece was designed to ensure the audience could access the data conveniently and understand the information presented.

**Discussion & Future Work:**

The project has enabled the audience to learn about the alarming reality of climate change and its impact on global temperatures and sea levels. The interactive data visualizations and engaging narrative strategy have made the information more accessible and understandable for a wider audience.

Furthermore, the project highlights the importance of taking action to address climate change and encourages individuals and organizations to do their part in mitigating its impact.

The project can be extended in the future by adding more in-depth D3.js visualizations and further improving the CSS styles to enhance its visual appeal and overall presentation. Adding an interactive D3.js map to show temperature changes in different countries can also be an effective way to engage the audience and provide them with a more detailed understanding of the effects of climate change around the world.

Additionally, conducting more interviews with climate change experts can add valuable perspectives and make the project even more credible to the audience.