

Paper Title:

A Visual Data Science Solution for Visualization and Visual Analytics of Big Sequential Data

Paper Link: <https://ieeexplore.ieee.org/document/9582677>

1 Summary**1.1 Motivation**

This paper aims to present a visual data science solution for the visualization and visual analytics of big sequential data. The idea was illustrated with the real-life data of COVID-19 epidemiological data. This type of analytics can help to provide a good outcome for data mining algorithms, mathematical, machine learning, or social.

1.2 Contribution

This paper basically makes a significant contribution by implementing big data visualization and visual analytics to COVID-19 data. It basically allows to visualize epidemiological data and their trends. For the research purpose, the authors collected the data and integrated it from rich data sources.

1.3 Methodology

In this paper, the methodology includes collecting, integrating data from rich data sources, pre-processing, and building a temporary hierarchy for the purpose of generalizing the data. Here the dynamic streaming data can be more meaningful so the author has focused on that too like: Collecting data on a daily basis that can provide a better solution compared to a yearly basis.

1.4 Conclusion

Overall the paper represented a visual data science solution for the visualization and visual analytics of big sequential data. For the evaluation, the Canadian COVID-19 epidemiological dataset has been used. The solution represented compositions of features associated with these 1,368,422 Canadian COVID-19 cases in a stacked column where the individual column clarifies the features of a week.

2. Limitations**2.1 First Limitation**

- **Results issue:** The author acknowledged here that It can not provide good results if the data is not updated on a daily basis

2.2 Second Limitation

- **Dataset issue:** The authors have worked with the COVID-19 dataset and they mentioned that it will work for every type of dataset field. However, they did not provide an in-depth clarification about it which does not give a clear idea about the other types of datasets.

3. Synthesis

Here the developed visual data science solution has potential application. It can provide enough useful information and knowledge that can be used for various activities. They have used the COVID-19 dataset for their research activity and it provides popular features that are yet to be discovered from the dataset such as hospitalization status, clinical outcomes, Transmission method, etc. The paper aims to enhance visibility, interpretability, and explainability.