Interactive data visualization is a technique of analyzing data, where a user interacts with the system that results in visual patterns for a given set of data. In this paper, seven basic modules and their corresponding operations have been proposed that an interactive big data visualization tool for Census dataset should possess. The current visualization tools for Census dataset are limited in their results due to lack of interactivity. This paper aims to eliminate the limitation by enhancing the interactive visualization process with more relevant operations for manipulation of resultant visuals according to various attributes. Gaps and discontinuities in data have also been considered for visualization. Reliability factor for the sources of the big data has been introduced. It also explains why Census dataset requires additional features and modules in comparison to the ones in existing visualization tools. The working of every module and operations associated with it has been described using a real life example of Census Data for a country.


**Index Terms**

Computer Science  
Information Sciences

**Keywords**

Big data; Census data; interactive visualization; visualization tool