

Visual Representation of Literacy Stats of South India through Tableau

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Abstract: *This application is a simple data presentation about the analysis of literacy rate of south India over past 5 decades. Literacy rate is a key factor for analyzing development of a particular region. It is quite difficult to gather such information. To get such data one should go through several websites and spend a lot of time to analyze it but our application provides a detailed analysis with multiple graphs which are easily understandable by everyone. Our application provides literacy trends of south India on various scales such as male and female literacy rates, most recent records of particular state and literacy rate stats over past 5 decades in a very effective way. One can get a detailed knowledge on literacy rates of south India with a glance at our application.*

Keywords: Tableau, Visualization, Literacy, India.

I. INTRODUCTION

An individual is termed as a literate if he/she is aged 7 or above and is capable of both read and write in any language. Literacy rate is calculated as number of literates for every hundred people. One should spend much time to gather such information and much more to analyze that. Our application provides the analysis of literacy rate in very effective manner through graphical representation. Right to education is a fundamental right and UNESCO aimed at education for all by 2015. Growth in literacy rate is indeed necessary for country's development. By observing these trends one can come to a conclusion about which states need to regulate their education system. The most recent census provided a positive indication that growth in female literacy rates was substantially faster than in male literacy rates in 2001-11 decadal period which means the gender gap appears to be narrowing.

II. PROPOSED SYSTEM

The goal of our application is to make the raw data and analyses on it, available to everyone in few clicks. Our agenda is to simplify the process of gathering data and make it easily understandable. We provided several graphs regarding south Indian literacy rates with different types of comparisons. One can get a perfect idea on literacy rate trends of south India through our application.

III. TECHNOLOGIES USED

3.1 Microsoft Excel

Excel is typically used to organize data and perform financial analysis. It is used across all business functions and at companies from small to large. Microsoft Excel is one of the most significant computer programs because of the key role it plays in many sectors. It is the most widely used spreadsheet program in many corporate, class work and even personal data organization. Excel reduces the difficulty of plotting data and allows students a means for interpreting the data. You can also reverse the traditional process of analyzing data by giving students a completed chart and see if they can reconstruct the underlying worksheet. The user can also implement numerical methods in Microsoft excel. Excel version we used is Excel 2007.

3.2 Tableau

Tableau Software is a tool that helps make Big Data small, and small data insightful and actionable. The main use of

Tableau software is to help people see and understand their data. Tableau is a data visualization tool which is viewed by many disciplines as a modern equivalent of visual communication. The major work of Tableau software is to connect and extract the data stored in various places. It can pull data from any platform. Tableau can extract data from any database, be it Excel, PDF, Oracle, or even Amazon Web Services. The data extracted can be connected live to the Tableau data engine, Tableau Desktop. The primary goal of data visualization is to communicate information clearly and efficiently via statistical graphics, plots and information graphics. Tableau tool is also available to use online without downloading. For our application we used online version.

3.3 File

The new option will be used for creating a tableau file and load all the necessary attributes into it. The tableau file will be saved with an extension: .tbw. These files can be various types of format of data.

3.4 Dashboard

A dashboard is a collection of several worksheets and supporting information shown in a single place so you can compare and monitor a variety of data simultaneously. For example, you may have a set of views that you review every day. Rather than flipping through each worksheet, you can create a dashboard that displays all the views at once. A data dashboard is mostly used by businesses to help track, analyze, and display data, usually to gain deeper insight into the overall wellbeing of the organization, a department, or even a specific process.

3.5 Server

Tableau Server public is the option where the tableau application is linked with the web application to get the information. The Tableau Software is an online solution for sharing, distributing, and collaborating on content created in Tableau. Create workbooks and views, dashboards, and data sources in Tableau Desktop, and then publish this content to the server.

3.6 Maps

The application needs to visualize the data geographically; we can plot the data on a map in Tableau.

3.7 Data Preprocessing

Latitude and Longitude are used to locate any corner on earth easily. Each of them is usually in terms of two coordinates. We used latitudes and longitudes of states to represent the data in located map. We collected literacy rates of particular states from handbooks of respective districts as well as websites.

IV. RESULTS

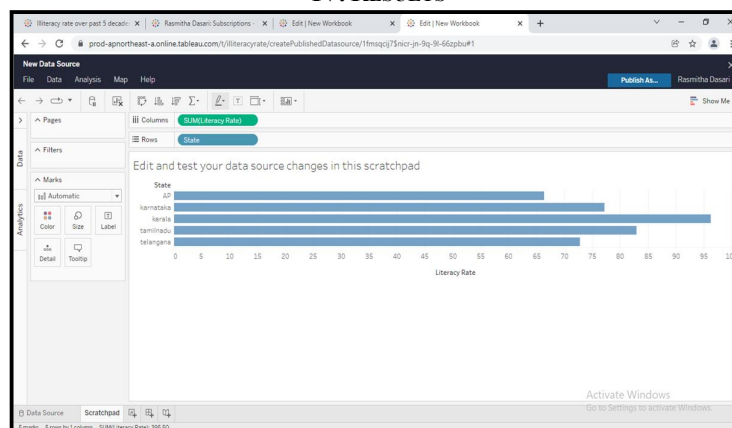


Figure 1 shows most recent literacy values of south Indian states

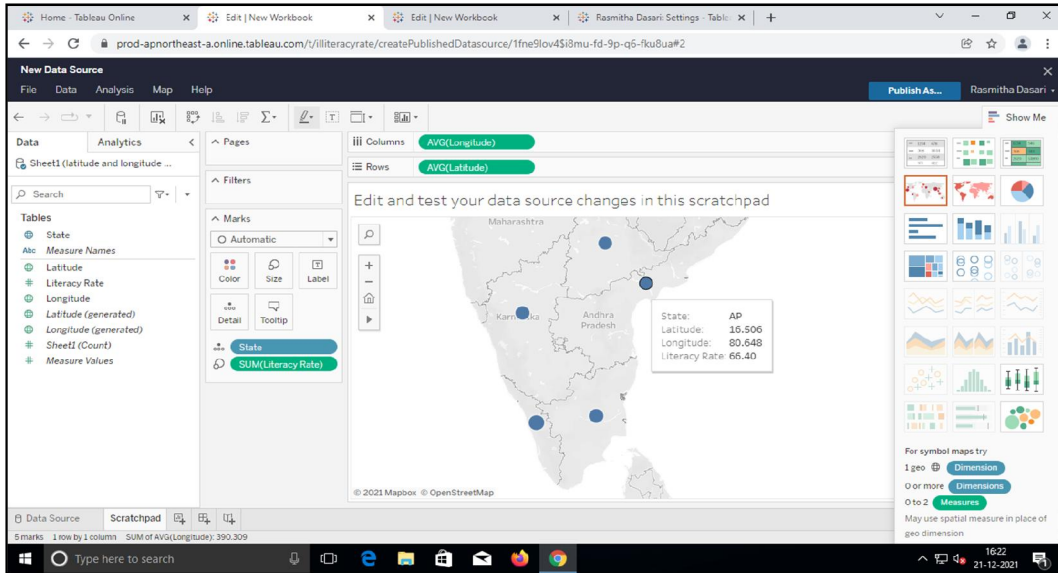


Figure 2 shows Literacy rates of selected state when mouse is placed over.

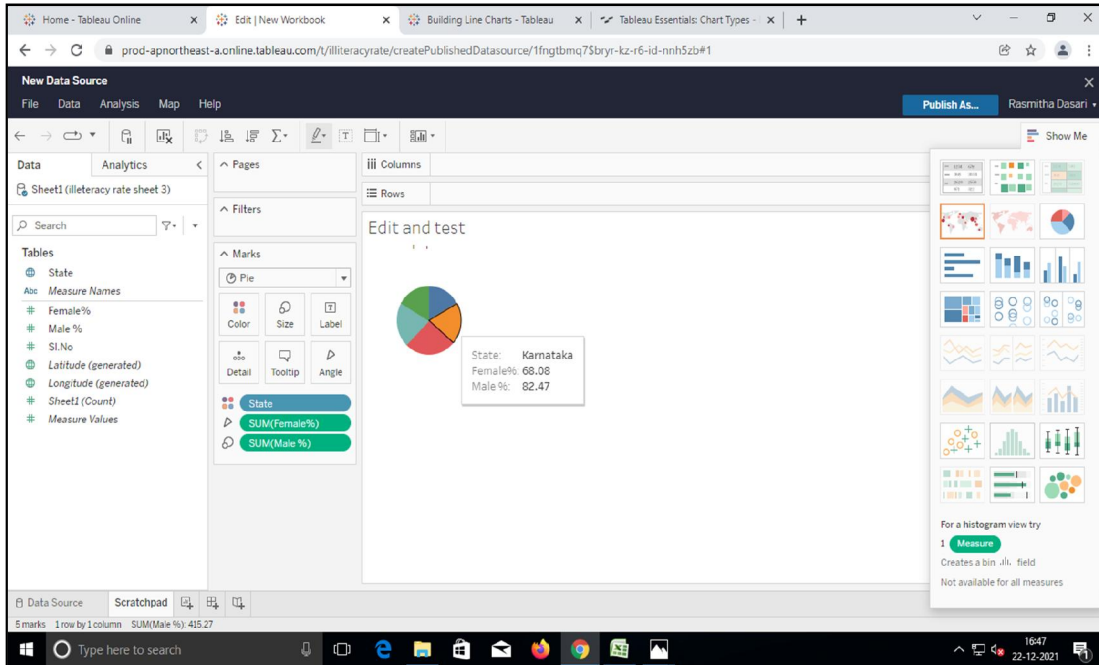


Figure 3 shows Male and Female literacy rates in south Indian states.

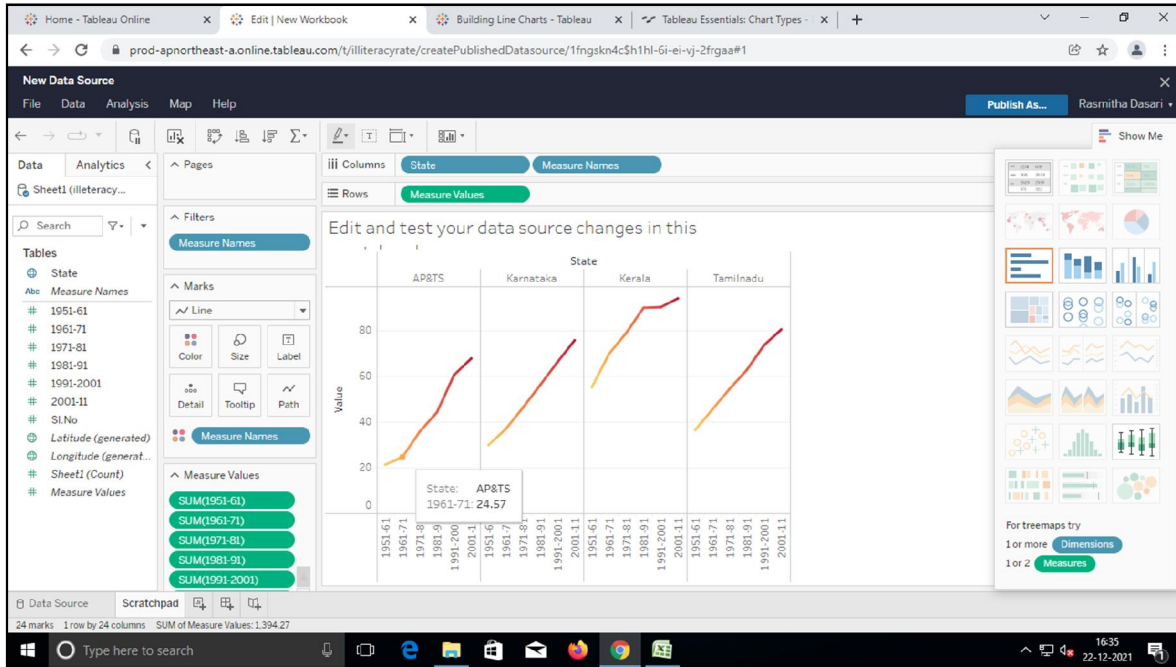


Figure 4 shows Increase/decrease in literacy rates in past 5 decades

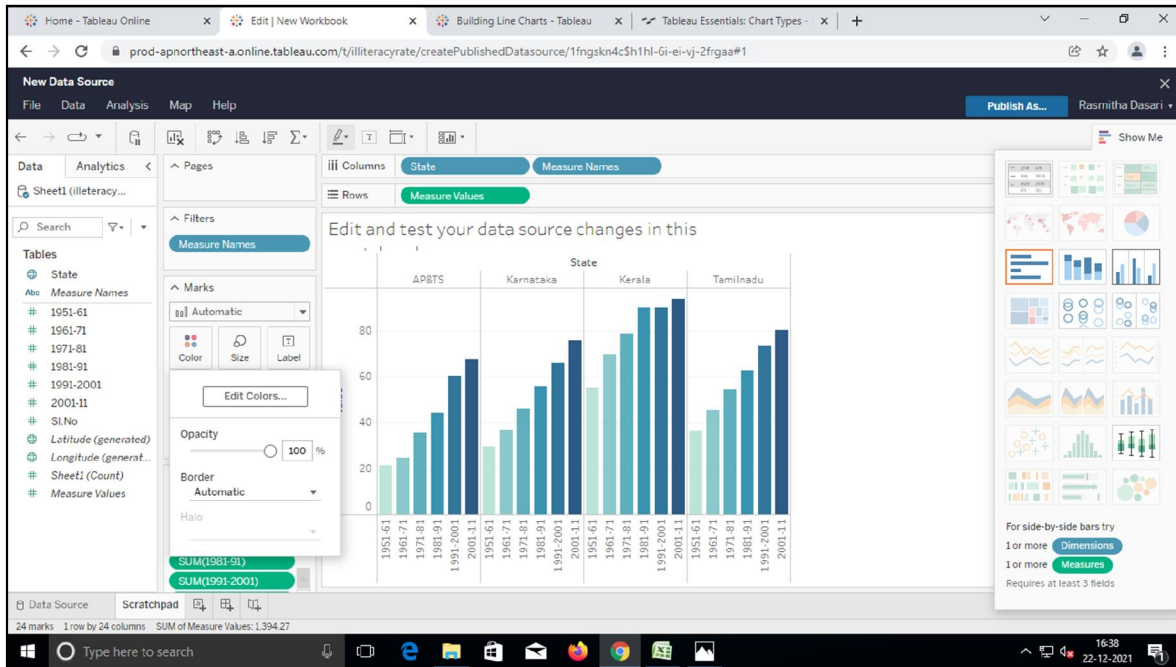


Figure 5 shows Literacy trends in south India over past 50 years.

V. CONCLUSION

The purpose of our application is to provide a detailed knowledge on literacy stats of south India. Similarly literacy rates entire country and even entire world can be provided. It is a herculean task to analyze all these information solely. Through our application all the data and its easily understandable representation is just a few clicks away.

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