TELANGANA GROWTH & INSIGHTS

A report submitted for the course of

Application Development (Data Analytics)

B. Tech III Year II Semester

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DATA SCIENCE

CERTIFICATE

This is to certify that this bonafide record of the Application Development **entitled TELANGANA GROWTH & INSIGHTS** submitted by **B. KESHAVA (2111CS030045)**, **B. LAXMINARAYANA (2111CS030051**), **S. MUZZAMIL Q(2111CS030059), M. NAGASANDEEP REDDY (2111CS030061), G. NIKESH (2111CS030065)** of III-year II Sem to the Malla Reddy University, Hyderabad. This bonafide record of work carried out by us under the guidance of our supervision. The contents of this report, in full or in parts, have not been submitted to any other Organization.

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ABSTRACT

Telangana is one of the fastest-growing states in India. There are several aspects that can be explored. In examining the growth path of Telangana, Data analytics can help to understand three essential datasets that are Stamp Registration, Transportation, and TS-Ipass. Each dataset provides a unique perspective on the state's development. Stamp Registration sheds light on real estate dynamics, Transportation data highlights logistical landscapes, and TS-Ipass offers insights into industrial growth. This analysis is centered on identifying trends, pinpointing growth opportunities, and understanding areas that demand strategic attention within each department. Through correlating these datasets, aim of this project is to offer a comprehensive and formal overview of Telangana's progress, employing visual aids like shape maps of districts of Telangana for clarity. This project serves as a comprehensive investigation, skillfully navigating through the intricate details of Telangana's journey towards economic prosperity.

Keywords: Power BI, TS-Ipass, Ts-Transportation, Stamp Registration, logistical landscapes, Tourism.

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LIST OF ABBREVIATIONS

EDA: Exploratory Data Analysis

CSV: Comma-Separated Values

TS IPASS: Telangana state industrial project approval and self-certification system

Chapter 1

1.1 Introduction

Telangana is one of the fastest-growing states in India. There are several aspects that can be explored. There are many areas in which its development is highly improving over the past decades. So, we have decided to understand the revenue that is being generated in various sectors which is being used to develop the state even further, better, and faster. In examining the growth path of Telangana, we have mainly focused on three major revenue-generating sectors namely:

1. TS-Ipass.
2. TS-Transportation and
3. TS-Tourism.

To understand the data sets and to draw conclusions we can use “Data analytics” which can help us to understand three essential datasets better. Each dataset provides a unique perspective on the state's development. For example, Stamp Registration sheds light on real estate dynamics, Transportation data highlights logistical landscapes, and Ts-Ipass offers insights into industrial growth. This analysis is centered on identifying trends, pinpointing growth opportunities, and understanding areas that demand strategic attention within each department. Through correlating these datasets, aim of this project is to offer a comprehensive and formal overview of Telangana's progress, employing visual aids like shape maps of districts of Telangana for clarity. This project serves as a comprehensive investigation, skillfully navigating through the intricate details of Telangana's journey towards economic prosperity

We have used the POWER BI tool which is a data analytical and visualization tool for creating the dashboards and insights reports.

1.2 Objectives:

The Primary object of this project is:

Analyze growth trends across different sectors within Telangana. Identify key drivers of growth and development. Provide actionable insights to aid decision-makers in the Telangana government. Create compelling data visualizations to communicate findings effectively.

- To help people understand the distribution of the revenue generation sectors.
- To make people realize the growth of different sectors.
- Utilizing the tabular data and making a visual format of that data.
- Understanding those Visual dashboards and concluding the insights.
- Giving out the reports in a way that can help authorities understand in which area they should focus more and how to distribute the collected revenue.
- And how to use it to develop the state even more.

1.3 Project Components:

The components are the individual parts of a project that are separate from each other but when combined it will give us the entire project as one.

As we have collected the data, we now need to draw visual insights using the collected data. To do that we will first clean the data and take the useful data while leaving the rest.

After that, we will divide the project into different components and work on each other differently.

This project consists of the following key components:

Data Analysis:

We conduct in-depth data analysis to uncover trends, patterns, and correlations within the provided datasets.

Data Visualization:

We utilize Power BI to create interactive and informative data visualizations that convey insights effectively.

Geospatial Mapping:

Geographic data is visualized on Telangana district maps to provide a regional perspective on growth.

Insights and Recommendations:

We present insights and recommendations based on data analysis, helping stakeholders make informed decisions.

CHAPTER-2

Review of Relevant Literature

The Growth of each state in India is astonishingly improving in various sectors and is contributing to the GDP of the country significantly as we can see the rise in the GDP increasing year on year. Telangana is one of the key states in India and is contributing to the country in various sectors. If we look at the growth of each state in India, Telangana is one of the fastest-growing states, and various factors are helping in upgrading the state for ex: Ts-Ipass, Transportation, and Stamp registrations.

We have taken all of these datasets from the official websites of the Telangana Govt. Framed our questions in a way that can help us understand the growth, revenue generation, and usage, and also make the dashboards to draw some conclusions.

Many people have done surveys and published their research data on the official websites of the Telangana state*

We have drawn inspiration and knowledge about our project from those datasets and the questions we have come up with, which has helped us a lot to do our project. This model or project will help people and also the govt to know about the possible ways they can spend the generated revenue in a better way to help the state achieve even greater growth rates among Indian states.

CHAPTER 3

METHODOLOGY

The proposed model:

In this section, a discussion of the proposed model is presented. the model undergoes three phases (1) data preprocessing, (2) feature selection Process, and (3) dashboard creation phases. Each of these phases is explained in the following subsections after a brief explanation.

3.1 Data Collection

In this project, we have used the data that we have collected from the official websites of govt of Telangana. And also, from the company websites.

3.2 Data Pre-Processing

We have pre-processed the dataset after combining the different datasets of the same columns from different websites. We have edited or cleaned the datasets according to our needs for ex: we have removed the unnecessary columns, and rows, and treated the null values along with duplicates.

After doing such, we then loaded the dataset into the power bi for further processing of the data, that is transforming it into useful data.

3.3 Data Processing

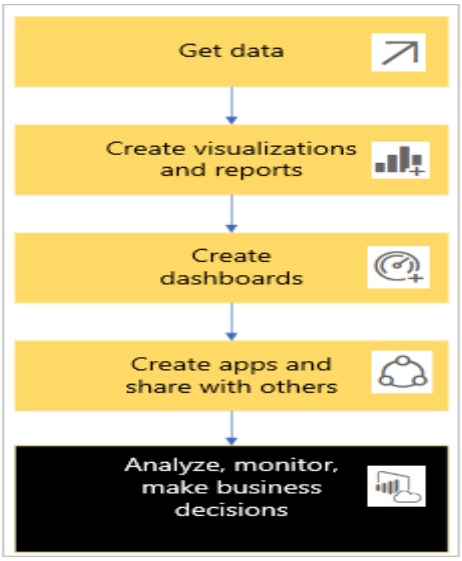
After Pre-Processing the data, we have processed the data into a better format, like:

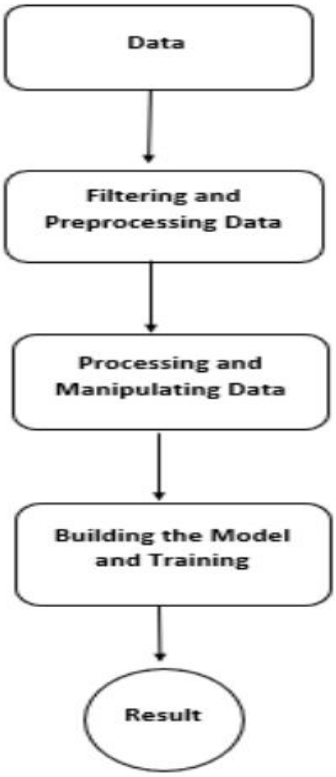
We have changed some data types so that it will become easier for the POWER BI to read and give outputs.

Used some filters and edited some columns and records.

Created a conditional column that gives us the info about the selling percentage of vehicles in a particular district.

Changed the order of the data to align it with the date and time.





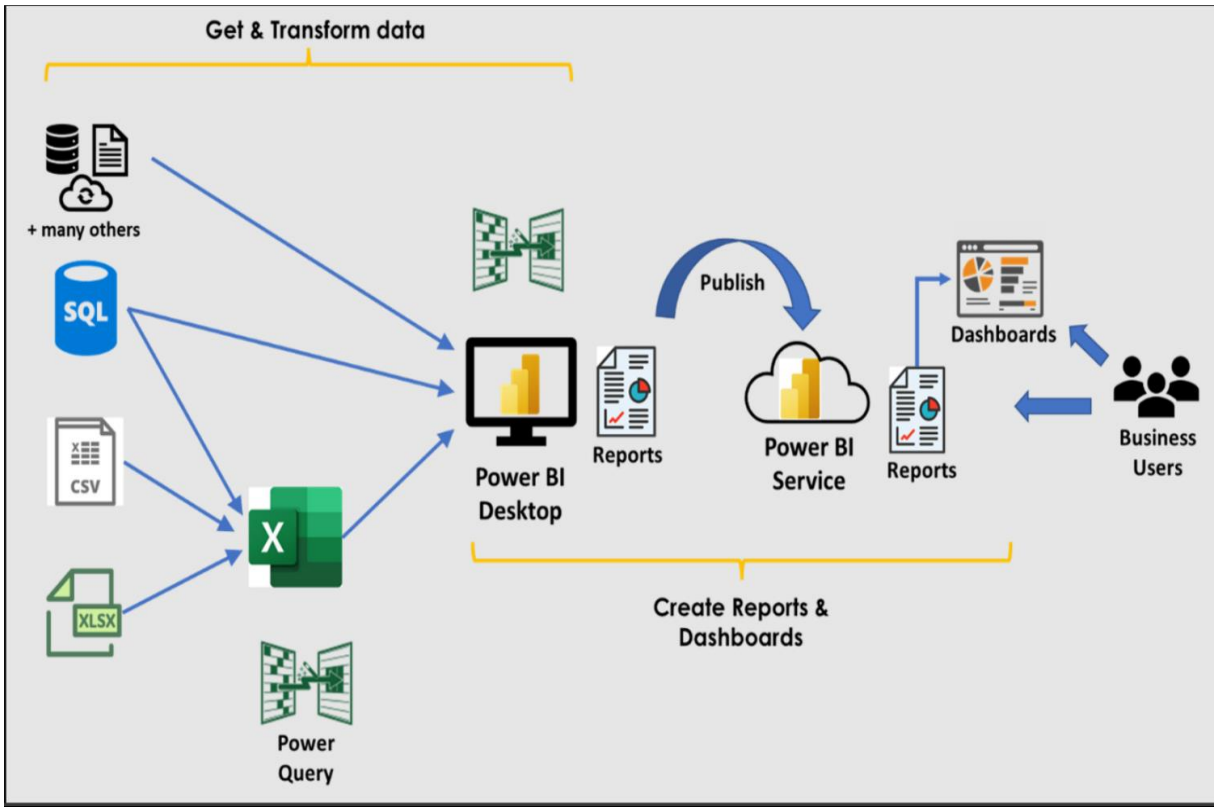
The above image shows us the basic overview of the project.

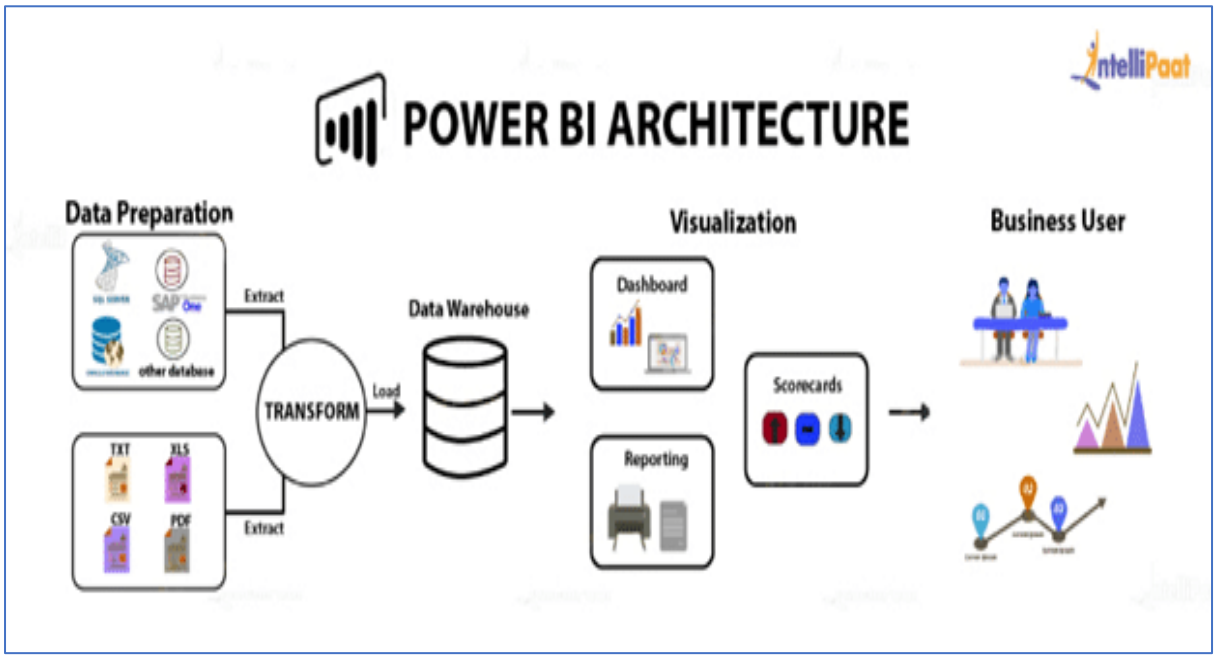
Here building the model means, creating multiple dashboards and connecting them for a better and quicker response.

Results imply the "**Insights and reports we have drawn after observing the data**."

3.4 UML DIAGRAM:

(Power BI Architecture)

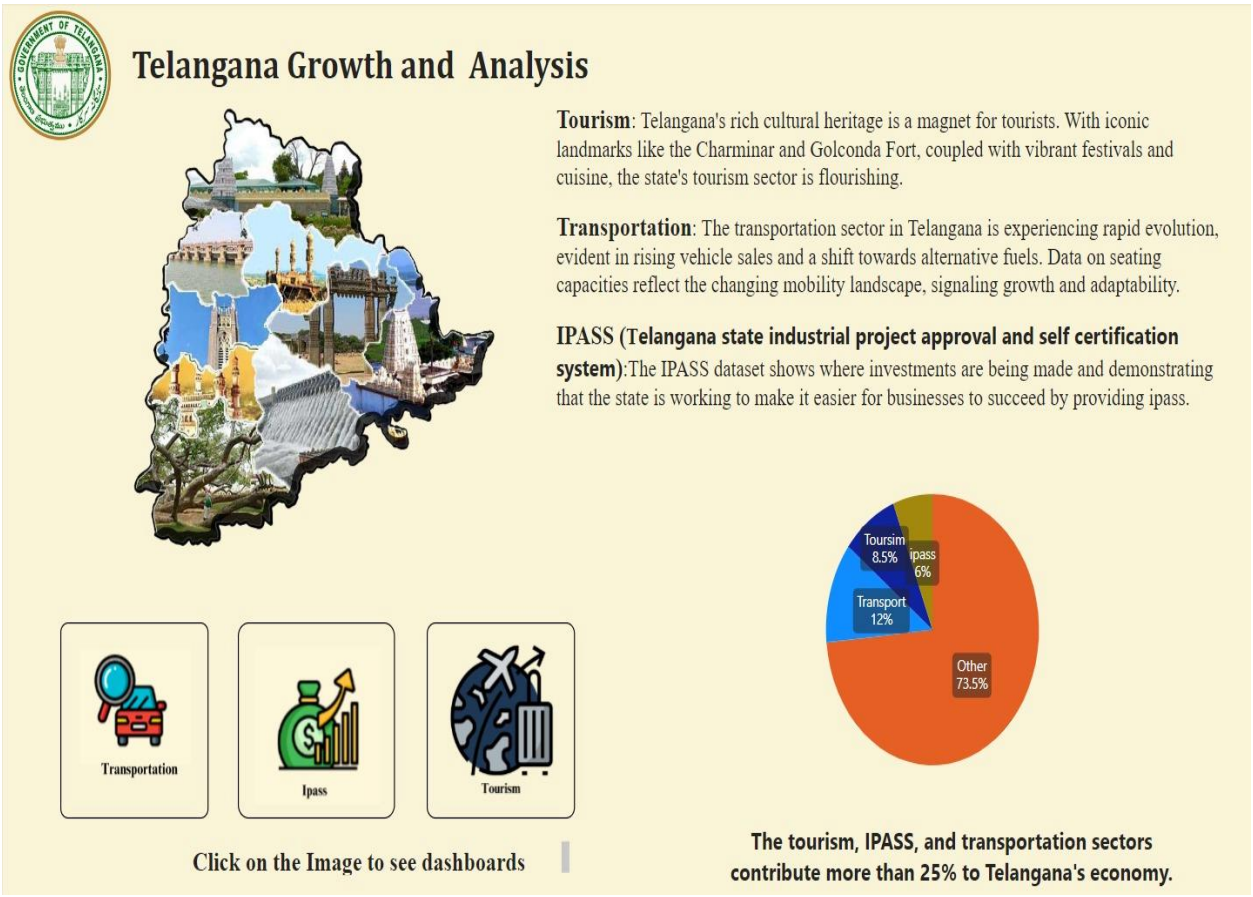




CHAPTER 4

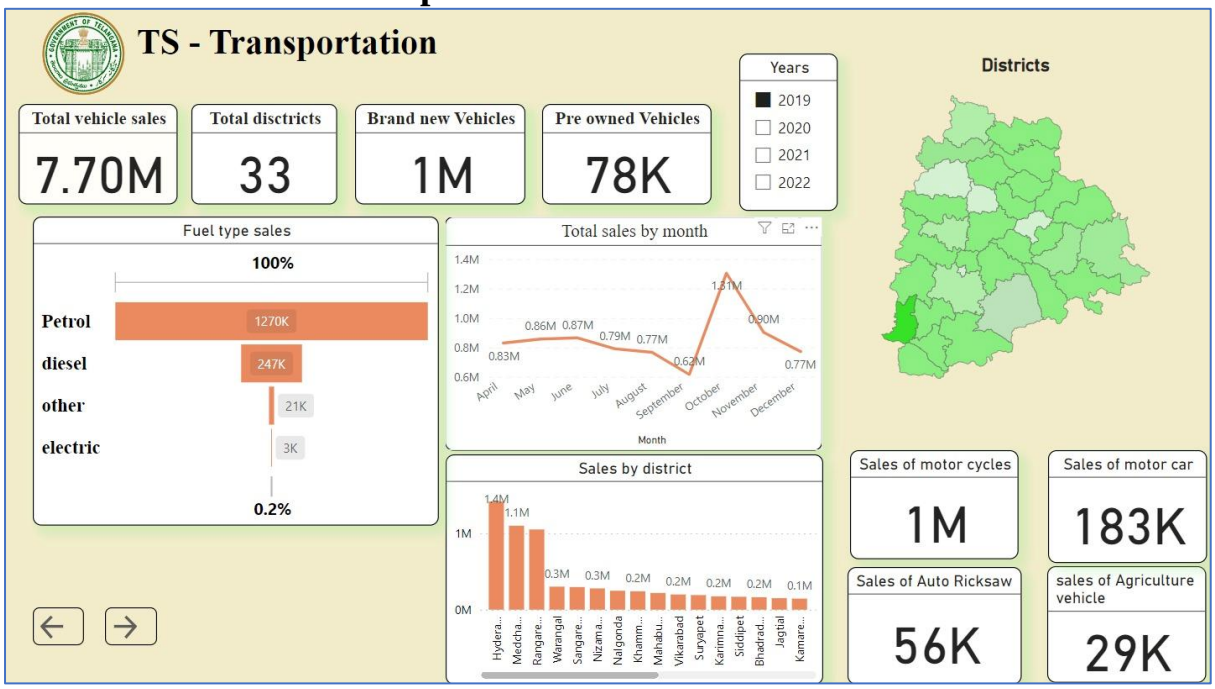
RESULT AND DISCUSSIONS

Dashboard:

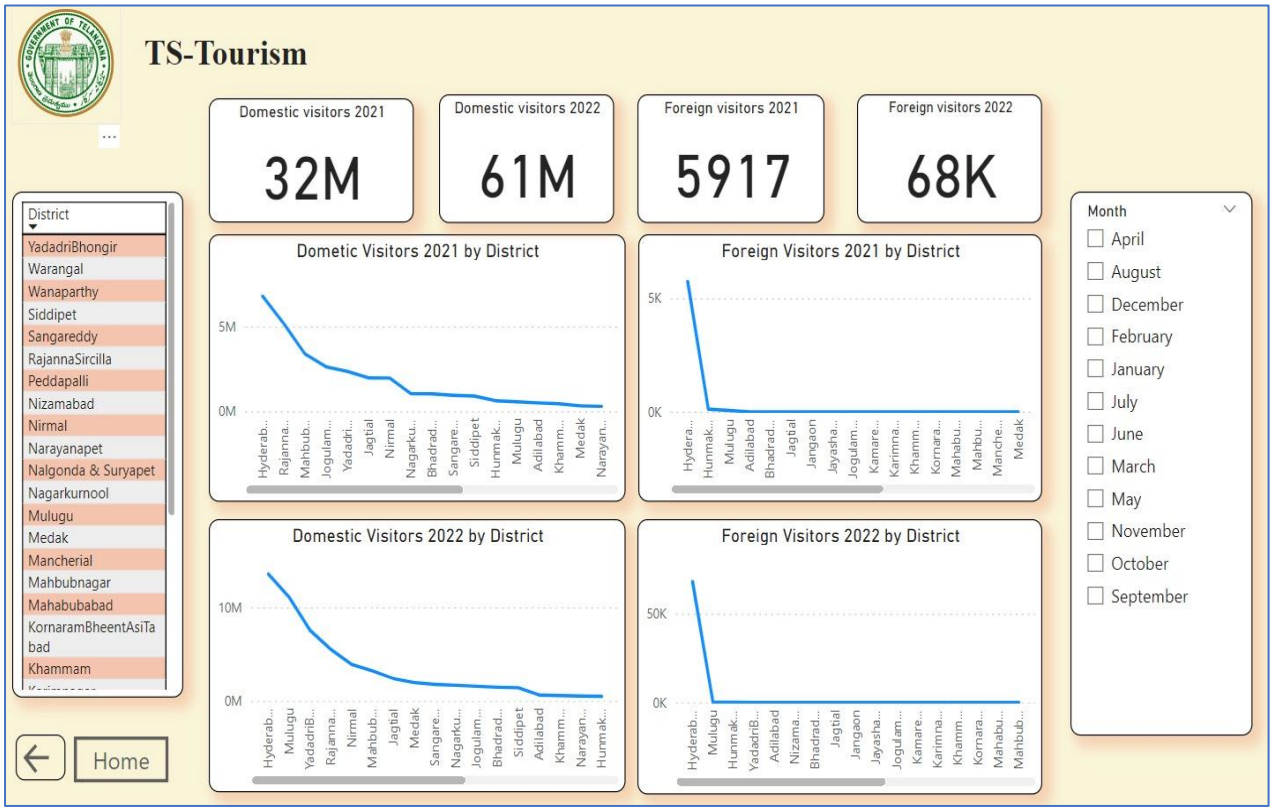


1. Dashboard of Ts-Ipass:

2. Dashboard of Transportation:



3. Dashboard of Tourism:



CHAPTER-05

CONCLUSION AND FUTURE SCOPE OF STUDY

CONCLUSION:

We have concluded that, the state is generating good amount of revenue from these three sectors, and probably more if we include other sectors as well.

The most amount of money is being generated by the districts that are big and close to the capital city.

We came up with some ideas that will likely increase the amount of revenue generation in other or poor-performing districts.

- Giving more I-passes to industries and other companies so that they can set up more sub-branches in nearby districts. Which will generate more income.
- Ceasing the vehicles that are old and their emission rates are past the limit. Which will result in the buying of new vehicles. Of course, officers should not do a false check.
- Constructing more parks or other tourism spots, to increase tourism. And also promoting the regional goods.
- Giving discounts on traveling fares over some hefty kilometers of distance. To boost the tourism.
-

FUTURE PLAN:

Though this project isn't the best out there, we plan to work on it for further improvement by taking even more sectors as inputs. We will try to work with even more comprehensive datasets to bring out a good result.

We hope this project has the potential to bring out some useful insights and be of some value to those who are referring to this. In the future, it turns into a better deal to conclude the development of the state and revenue distribution.

References:

1. All datasets have been collected from the Telangana website. https://data.telangana.gov.in/

2. Telangana-Growth-Insights-using-Power-BI/README.md at main · Vickerum/Telangan a-Growth-Insights-using-Power-BI · GitHub

APPENDIX

1.Dim_Date= Table.AddColumn(#"Inserted Year", "Month Name", each Date.MonthName([month]), type text)

2.Fact_tourism= = Csv.Document(File.Contents("fact_tourism.csv"),[Delimiter=",", Columns=6, Encoding=65001, QuoteStyle=QuoteStyle.None])

3.Fact_tsipass= = Csv.Document(File.Contents("fact_TS_iPASS.csv"),[Delimiter=",", Columns=5, Encoding=1252, QuoteStyle=QuoteStyle.None])

4.Fact_transport= = Csv.Document(File.Contents(fact_transport.csv"),[Delimiter=",", Columns=18, Encoding=1252, QuoteStyle=QuoteStyle.None])

5.Fact_district=Csv.Document(File.Contents("dim_districts.csv"),[Delimiter=",", Columns=2, Encoding=1252, QuoteStyle=QuoteStyle.None])