REPORT

TOPIC: TeleLaw Cases

Regrssion Time Series Model
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Introduction:

Telephonic case recording" refers to the process of documenting legal proceedings, discussions, or consultations conducted over the telephone. This method involves recording audio conversations between legal professionals, clients, witnesses, or other relevant parties involved in a legal matter.

Telephonic case recording is commonly used in situations where physical presence is impractical or not feasible, such as remote hearings, client consultations, or discussions with experts located in different geographic locations. It allows legal professionals to conduct interviews, gather evidence, provide legal advice, or document statements without the need for face-to-face interaction.

The recordings captured during telephonic case recording serve as crucial documentation of verbal exchanges, agreements, or decisions made during legal proceedings. These recordings are often transcribed into written documents for further analysis, reference, or presentation in court.

Telephonic case recording may also involve the use of specialized recording equipment or software designed to capture high-quality audio and ensure the accuracy and integrity of the recorded conversations. Additionally, legal regulations and ethical considerations may apply to the recording, storage, and use of telephonic case recordings to protect the privacy and confidentiality of the parties involved.

In the given data set there were three main variable we were dealing those were :
States
Districts
Year
No of CSCs
Cases Registered

Objectives:

Recording tele law cases can serve various objectives, depending on the context and goals of the legal system. Here are several potential objectives for recording tele law cases:

1. Documentation and Record-Keeping: One primary objective is to create a comprehensive record of legal proceedings, including case details, arguments presented, decisions made, and outcomes reached. This documentation is crucial for maintaining transparency, accountability, and historical reference.

2. Legal Research and Precedent:Recorded tele law cases can be valuable for legal research purposes, providing a rich source of precedents, legal principles, and judicial interpretations. Legal professionals, scholars, and policymakers can analyze past cases to inform current legal strategies, shape future decisions, and establish legal precedents.

3. Quality Assurance and Oversight:** Recording tele law cases enables oversight bodies, regulatory agencies, and professional associations to monitor the quality of legal proceedings and ensure adherence to ethical standards, procedural rules, and legal principles. It helps identify any irregularities, biases, or misconduct that may occur during the legal process.

4. Education and Training: Tele law case recordings can be used for educational purposes, including legal training, continuing education programs, and academic courses. Law students, legal practitioners, and other stakeholders can study real-world cases to enhance their understanding of legal concepts, courtroom procedures, and professional best practices.

5. Public Access and Transparency: Making tele law case recordings accessible to the public promotes transparency and openness in the legal system. It allows citizens to observe court proceedings, understand judicial decisions, and hold legal authorities accountable. Public access to case recordings fosters trust in the legal system and strengthens democratic principles.

6. Dispute Resolution and Mediation: Recorded tele law cases can facilitate alternative dispute resolution processes, such as mediation and arbitration. Parties involved in legal disputes can review past cases to gain insights into potential settlement options, negotiation strategies, and resolution outcomes, thereby promoting efficiency and effectiveness in conflict resolution.

7. Evaluation and Performance Metrics: Analysing tele law case recordings can help evaluate the efficiency, effectiveness, and fairness of the legal system. By examining trends in case outcomes, case duration, judicial workload, and other metrics, policymakers and stakeholders can identify areas for improvement, allocate resources strategically, and enhance access to justice.

Overall, recording tele law cases serves multiple objectives, ranging from documentation and research to education and public access. By leveraging technology to capture and preserve legal proceedings, the legal system can achieve greater transparency, accountability, and fairness, ultimately enhancing the administration of justice.

DASHBOARD VISUALIZATION:

First Tab:

The Data set that has been used for the dashboard basically provides the brief information about the cases that had been reported in the Indian Jurisdiction via telephonic calls. Some variables that were present in the data set including **Construction Skills Certification Scheme, Case Registered and Advise Enabled.** The dashboard created basically analyses the data from every aspect. The Dashboard has been divided into parts. The first part of the dashboard named as "Data Set" basically defines the data and gives a brief overview of the data via number of variables, summary stats and via displaying the whole data set very clearly on the front screen of the data set. This screen is dynamic as it will adjust itself according to the users' requirements. I have picked up the data from the open government database website link : https://data.gov.in/resource/district-wise-tele-law-case-registration-and-advice-enabled-data-fy-2021-22-2022-23. The front page also has a tab over head wherein it has the link to the YouTube code taken as well as my linked in profile followed by the GitHub code.

2. The Second Tab:

This is the visualisation page. Here I have added all the graphs and correlation matrix, etc. The significance of this page is to provide the insights of the data and make it easier for the user to read and understand the data without having a deep overview of the data. This page consists of basically 4 tabs named as below:

1. Trends by District
2. Distribution
3. Corelation Matrix
4. Relationship among No. of CSCs, Cases Registered & Advice Enabled

2.1. Trends by District:

This gives us a brief idea about the number of **Construction Skills Certification per district** using a bar graph. It also provides us the brief overview of the 5 districts with latest year data along with the details about the districts with the least recent year data.

2.2. Distribution:

This will give us the overview to understand the **distribution of number of construction skills certification, Cases registered and advise enabled in comparison to the states**. I have created a column chart using group function to group the states together in one.

2.3 Correlation Matrix:
A correlation matrix is a table showing correlation coefficients between variables. Each cell in the table represents the correlation coefficient between two variables. **Correlation coefficients range from -1 to 1**, where:

- 1 indicates a perfect positive correlation,
- -1 indicates a perfect negative correlation, and
- 0 indicates no correlation

The correlation Matrix created in this tab is created using ggcorrplot, for the utilization of this function I have also downloaded a library known as library(ggcorrplot). Further the color coding used in this corelation matrix used red and orange as mentioned in the table:

Sno.	Correlation Coefficient	Colour
1	1.0	Red
2	0.5	Orange
3	0.0	White
4	-0.5	Light blue
5	1.0	Blue

4. Relationship among No. of CSCs, Cases Registered & Advice Enabled:
To define the relation between the above variable I have used a scatter plot. A scatter plot is a type of data visualization that displays the relationship between two continuous variables. It is commonly used to investigate the correlation or association between these variables. In a scatter plot:

1. Each data point represents a single observation.
2. The x-axis (horizontal axis) represents one variable, while the y-axis (vertical axis) represents the other variable.
3. Each data point's position on the plot is determined by the values of the two variables it represents.

Here also I have done for the highest to lowest number of cases identified. Yellow is the colour code used to identify if the cases as highest opposing violate wherein the data of number of cases is least.

Analysis : According to the analysis done the most districts that were surveyed most recently included Andaman and Nicobar in Nicobar district in the year 2022- 23. The Number of CSCs were

Detailed analysis of Trends by District:

Objective : To analyse the districts overview and the maximum and minimum number of

cases recorded in the mentioned district and what are the actions taken in case of advise enablement.

5 districts with latest year data

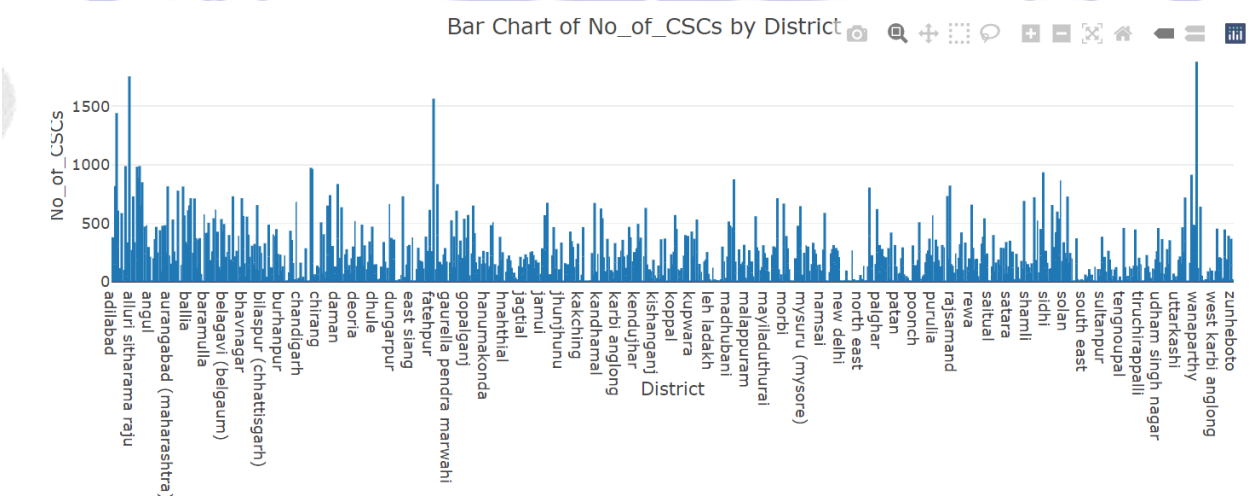
Year	state	district	No_of_CSCs	CasesR	Advice
2022-23	andaman and nicobar	nicobar	1	283	270
2022-23	andaman and nicobar	north and middle andaman	15	1123	969
2022-23	andaman and nicobar	south andaman	13	370	352
2022-23	andhra pradesh	alluri sitharama raju	1	39	39
2022-23	andhra pradesh	anakapalli	1	704	702

5 districts with the least recent year data

Year	state	district	No_of_CSCs	CasesR	Advice
2021-22	andaman and nicobar	north and middle andaman	2	60	48
2021-22	andhra pradesh	anantapur	230	7026	6104
2021-22	andhra pradesh	chittoor	185	1088	935
2021-22	andhra pradesh	east godavari	336	1221	1113
2021-22	andhra pradesh	guntur	200	832	749

As we can clearly see in the below picture the number of CSCs are highest in the north and middle Andaman, also having the maximum data stored in the Cases Registered followed by maximum number of advice. The second highest district reported was south Andaman. But the district having the maximum information record of the cases was Anakapalli district if Andhra Pradesh followed by advice being received in the same district.

Next we analysed that the data about the districts with least recent year where in we had noticed that the highest cases were registered in the east Godavari district of Andhra Pradesh having number of 1221. In least recent years I noticed that the cases were registered more than the CSCs.



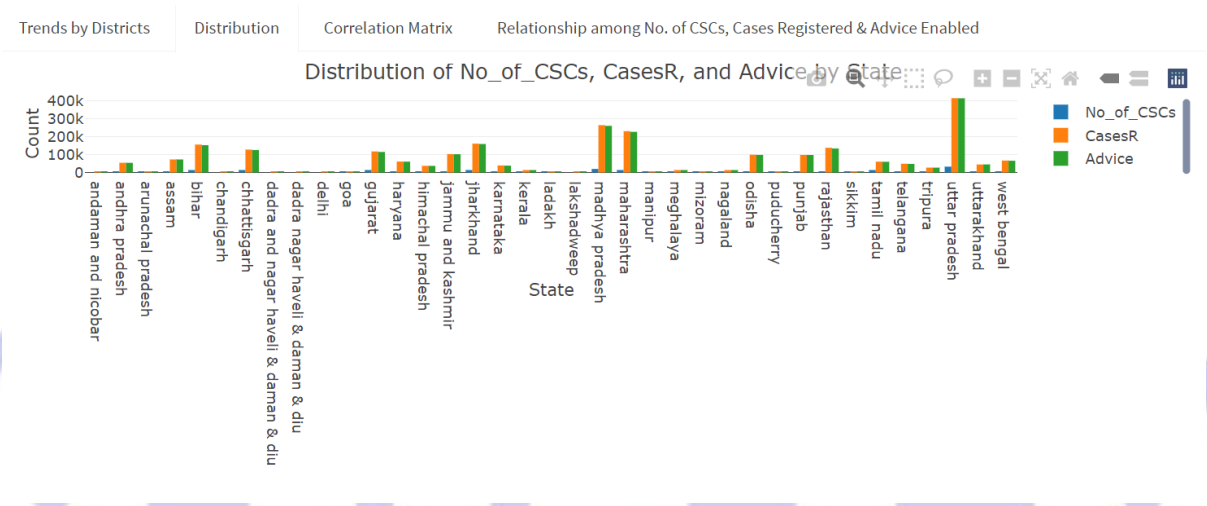
As we can notice in the chart above the data shows clearly that the maximum number if CSCs were recorded in Fatehpur, Adilaba, Chirang, Madhubani, Palghar and Wanaparthy. Least

records were held by the districts New Delhi, Buhranpur and Southeast India.

Observation about the data:
The data given was varying a lot as the data given was scarce. Hence creating a graph and selecting the right axis scale is important.

2. Distribution:

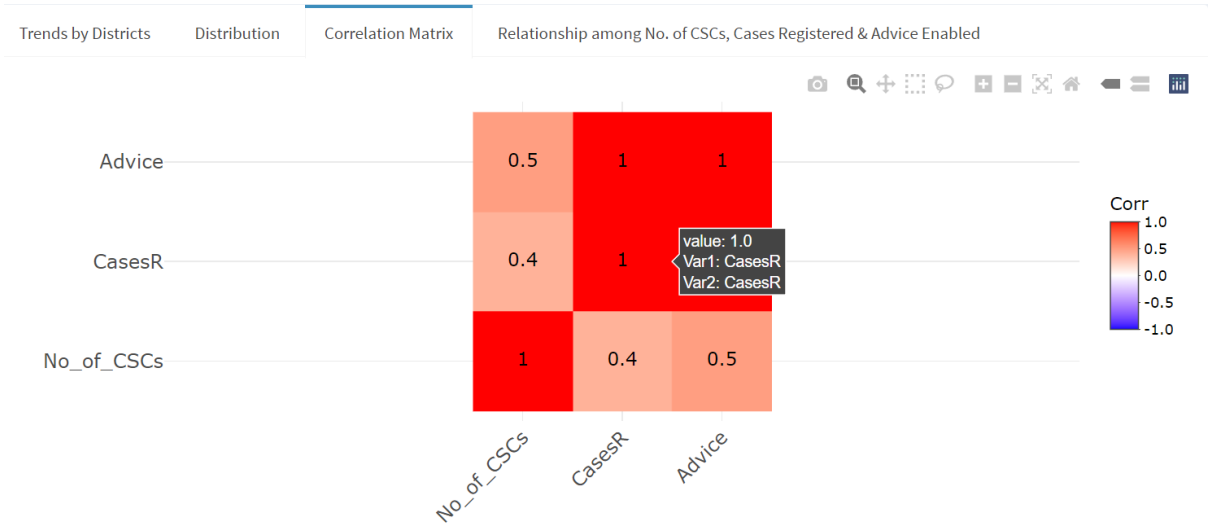
Objective: To identify the state wise distribution of the data in states.



Since there were three prospects that needed to be analysed in accordance with the states hence, I decided to create a column chart for the in-depth analysis of the data and easy understanding of the user. The crisper the data is the more it speaks the truth. I have also provided the index of the data colour code at left side of the data chart. In accordance with my analysis the number of CSCs were almost negligible in every state whereas it was maximum in Madhya Pradesh though still negligible. Now the overall status of states was that Uttar Pradesh held maximum number of cases registered along with the advice enabled. The one good thing I had noticed was that the number of cases recorded as well as the number of advice enabled was equal hence depicting that all the cases registered were addressed. Now the next states in the case were Madhya Pradesh followed by Maharashtra. In Madhya Pradesh the Advice enabled was slightly lower in comparison whereas in Maharashtra it was the almost equal.

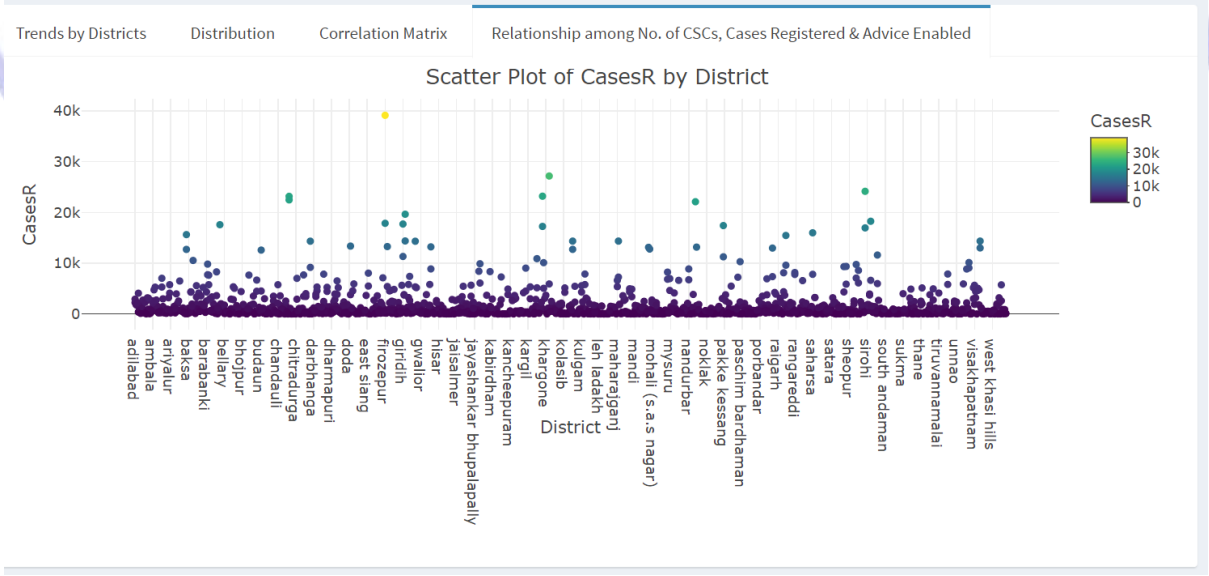
2.3 Correlation Matrix:

Objective : To check and analyse the correlation coefficient between advise enabled, cases registered and the number of CSCs.



Here it is clearly visible that the advise enabled and cases registered have a very strong correlation where as the no of CSCs and the cases registered hold the least amount of the coefficient of correlation.

2.4. Relationship among No. of CSCs, Cases Registered & Advice Enabled



Here according to the scatter plot the cases registered by the district are high in the Firozpur district followed by the lowest in the Ambala, Sukma, Visakhapatnam etc district. The variation in the data is large as it can be noticed that the data is varying from the 0 to 40K.

In Depth Analysis:

Test for TeleLaw cases recorded.

Objective: To check the impact of different states and years on registered cases.

Analysis: I have used Analysis of Variance (ANOVA) using the formula Cases ~ Year + Error (State / Year), which is suitable for examining the influence of the variable 'Year' on the response variable 'Cases', while considering potential differences among States and across Years within each State. Here, null hypothesis will be no significant relation between variables and alternate hypothesis shows significant relation between variables.

Result: • Error: State Df (Degrees of freedom): 1 for 'Year' and 34 for 'Residuals.'

Sum Sq (Sum of Squares): 583 for 'Year' and 76116 for 'Residuals.'

Mean Sq (Mean Squares): 583.2 for 'Year' and 2238.7 for 'Residuals.'

F value: 0.261 Pr(>F) (p-value): 0.613

This part of the output tests the overall effect of 'Year' on 'Cases' across all States. The F value is a ratio of variance between the groups (due to 'Year') to variance within the groups (Residuals). The p-value (Pr(>F)) indicates whether the observed F value is statistically significant. In this case, since the p-value is 0.613 (greater than the commonly used threshold of 0.05), we fail to reject the null hypothesis, suggesting no significant effect of 'Year' on ‘Cases' across States.