

ADVANCED DATA VISUALIZATION EXPERIMENT 4

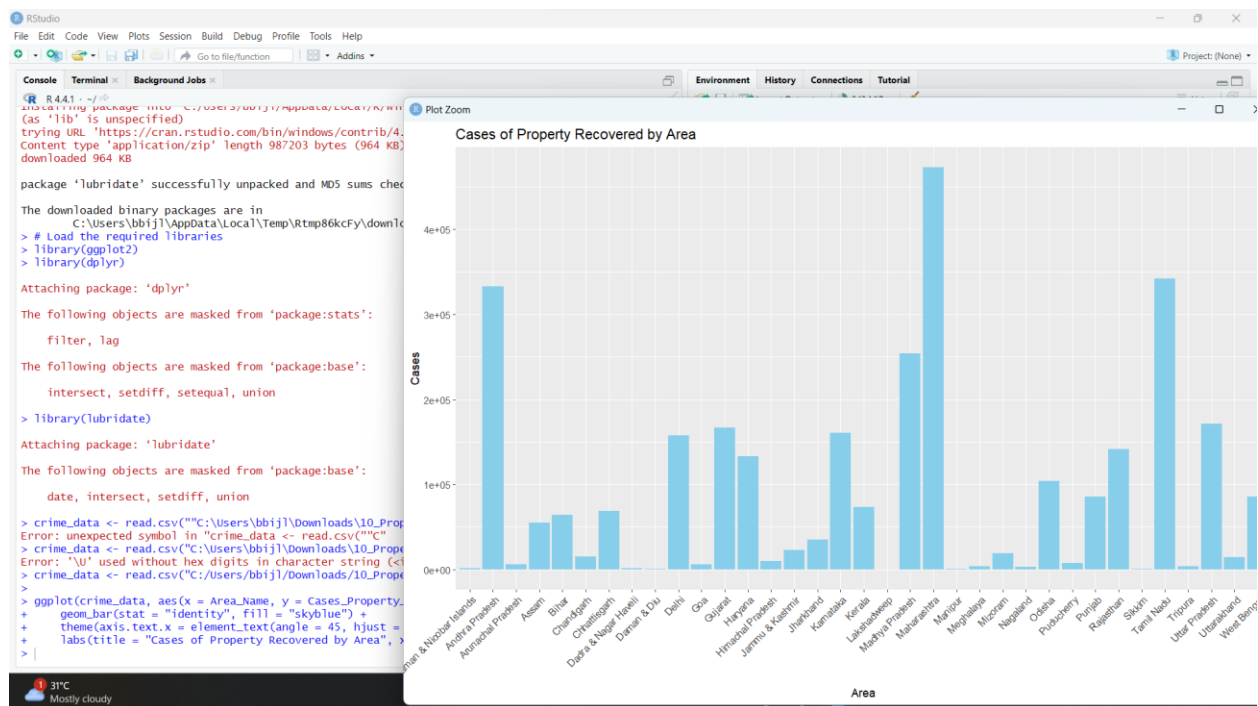
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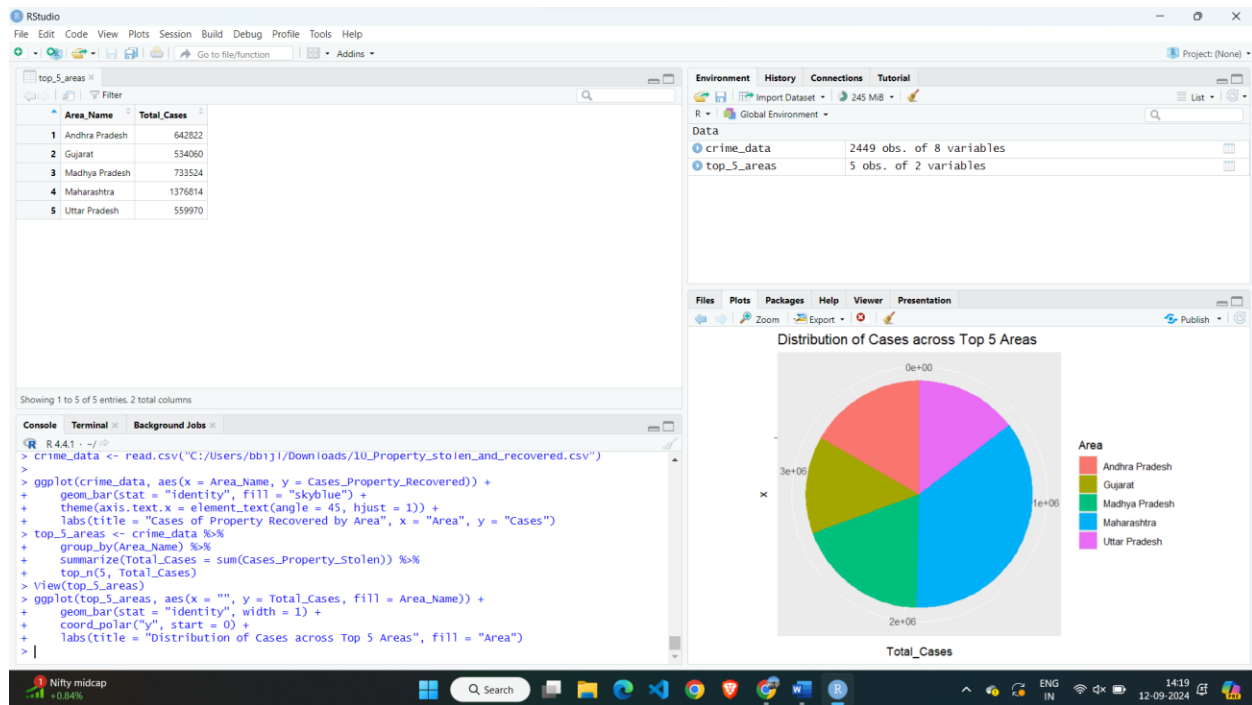
AIM: Create basic charts using R programming language on dataset Crime or Police / Law and Order

- Basic - Bar chart, Pie chart, Histogram, Time line chart, Scatter plot, Bubble plot
- Write observations from each chart



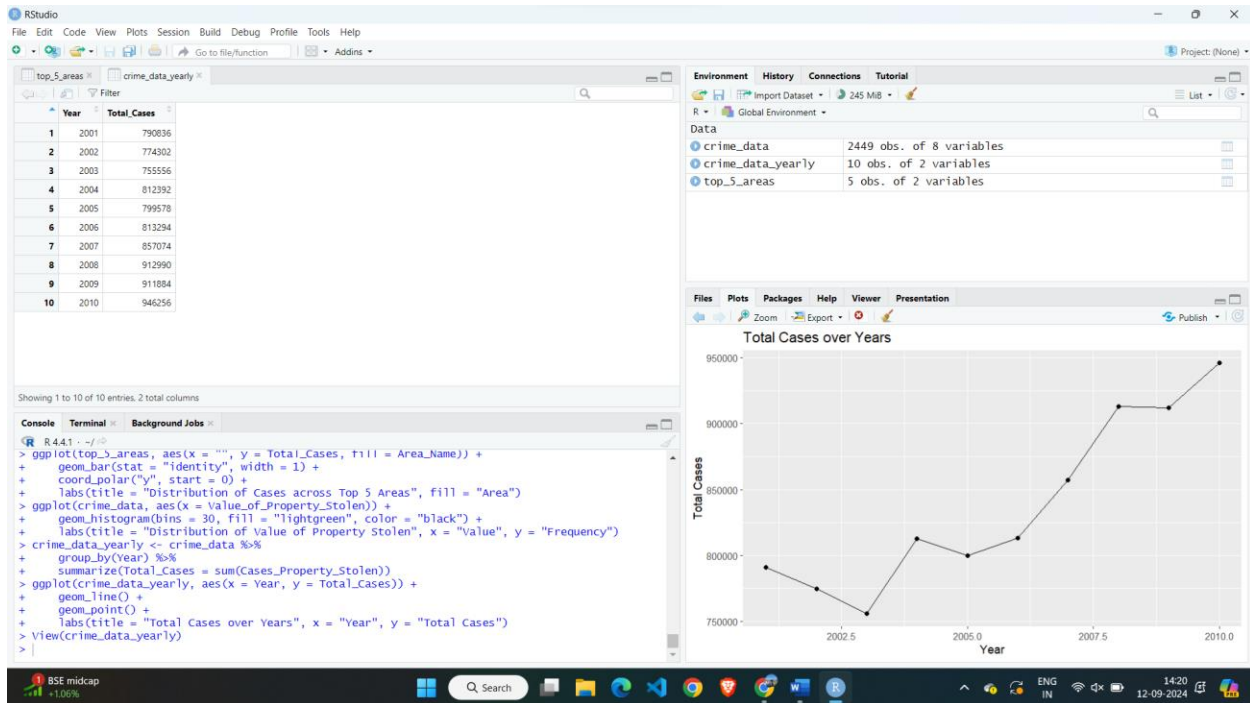
The bar chart shows the number of crimes across different states in India. From this visualization, we can observe:

- Uttar Pradesh has the highest number of reported crimes.
- States like Maharashtra, Madhya Pradesh, and Rajasthan also have relatively high crime rates.
- Some states like Sikkim, Mizoram, and Nagaland have very low reported crime numbers in comparison.



This pie chart represents the distribution of different types of crimes. Key observations include:

- Theft appears to be the most common type of crime, occupying the largest slice of the pie.
- Burglary and Robbery also make up significant portions of the total crimes.
- Crimes like Dacoity and Preparation & Assembly for Dacoity seem to be less common, represented by smaller slices.

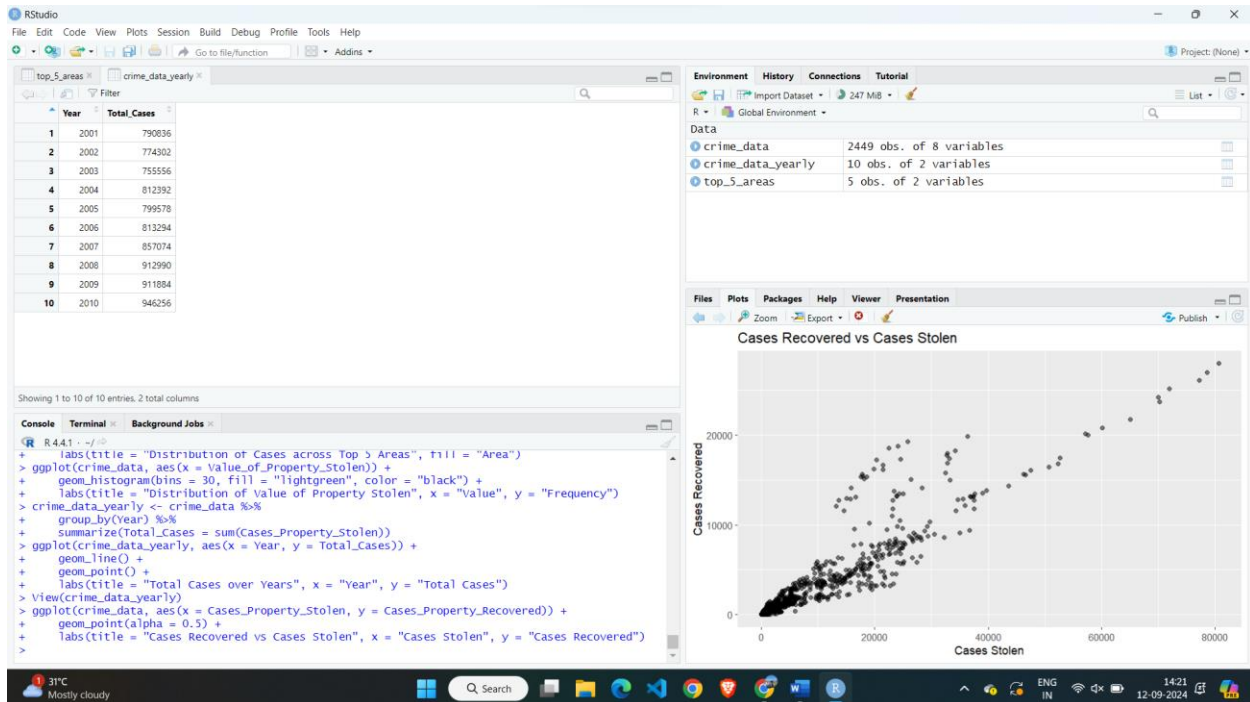


This chart shows the trend of crime over time. Observations include:

There's a general upward trend in crime numbers over the years.

The increase is not uniform, with some years showing steeper increases than others.

There might be a slight plateau or slowdown in the rate of increase towards the most recent years.

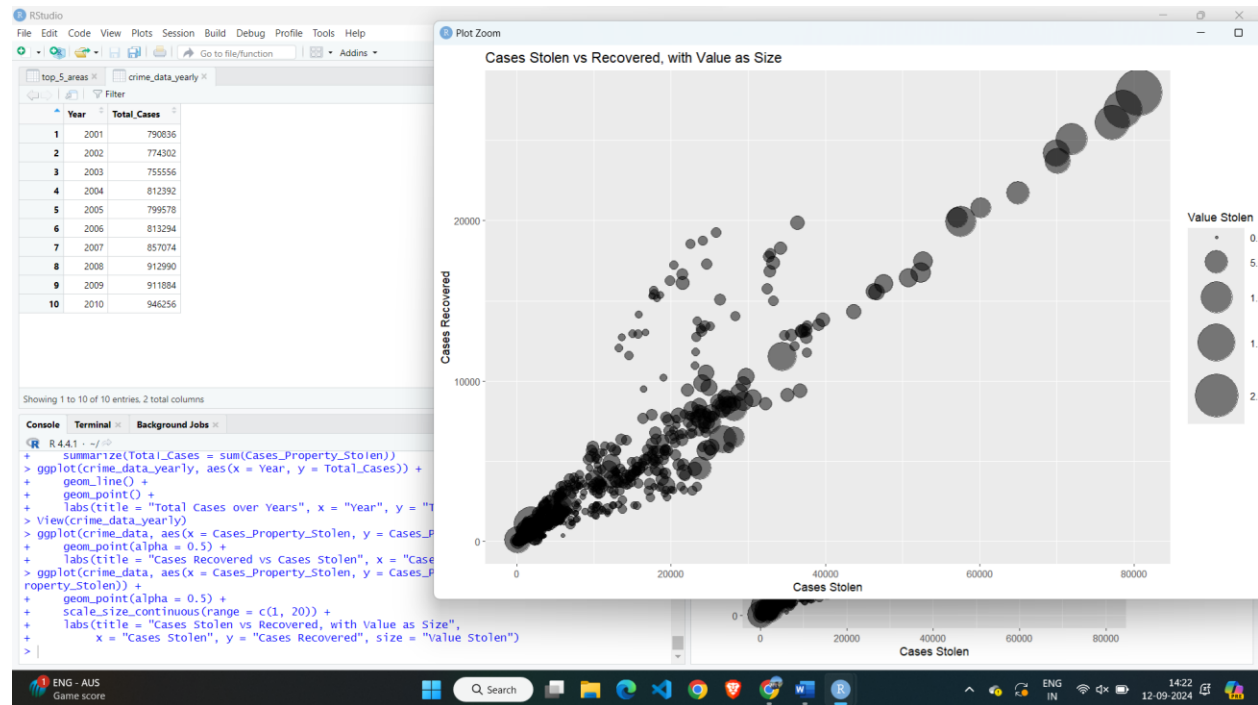


The scatter plot seems to be comparing two variables related to crime. Without axis labels, it's hard to be specific, but we can observe:

There's a positive correlation between the two variables.

The relationship appears to be roughly linear, with some deviation.

There are a few outliers that don't follow the general trend.

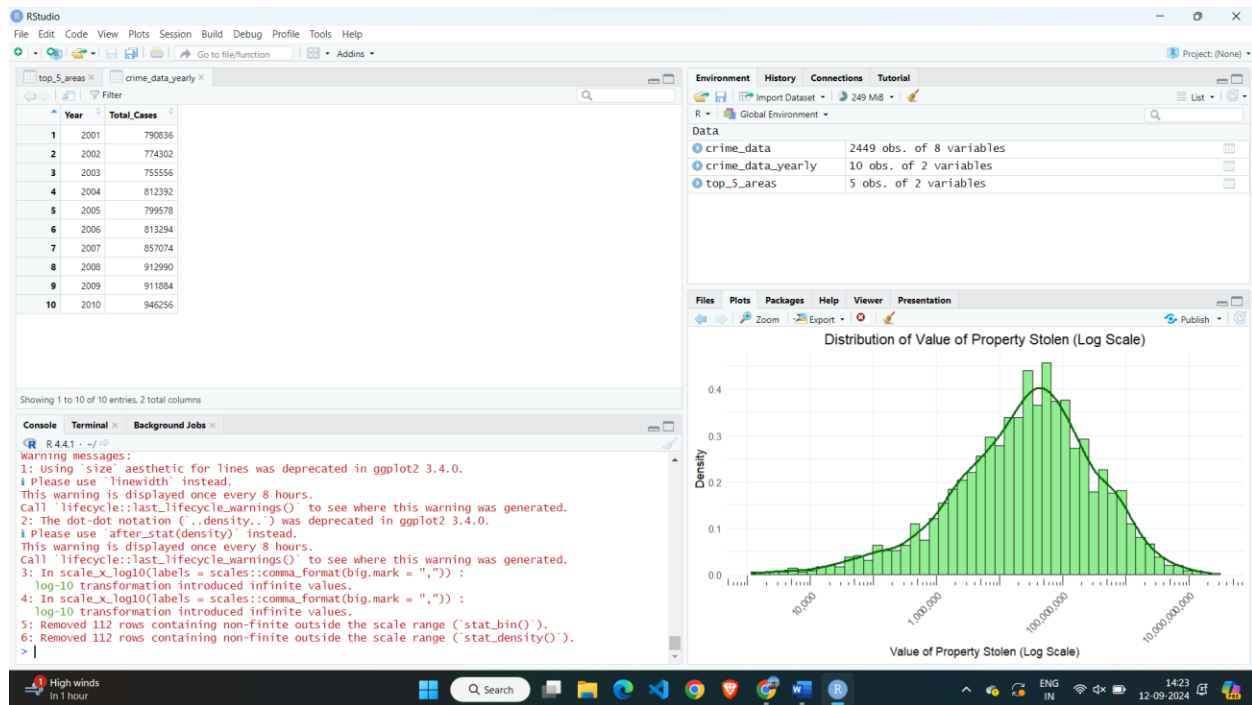


This plot likely represents three variables related to crime, with the size of bubbles representing a third variable. Observations include:

There's a cluster of smaller bubbles in the lower-left corner, possibly indicating many regions with lower values for all three variables.

A few large bubbles are scattered across the plot, possibly representing major cities or states with high values for all variables.

The overall pattern suggests that as one variable increases, the others tend to increase as well, but with notable exceptions.



The histogram appears to show the frequency distribution of crime rates or numbers. From this, we can observe:

- There's a right-skewed distribution, meaning most states or regions have lower crime rates/numbers.
- A few outliers or states with very high crime rates/numbers are visible on the right side of the distribution.
- The majority of the data points fall in the lower to middle range of the x-axis.