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# Load required libraries
library(ggplot2)
library(readr)

# Load dataset (replace 'your_file_path.csv' with the actual file path of your data)
data <- read.csv("/content/10_Property_stolen_and_recovered.csv")

# Bar Chart: Cases of Property Stolen by Area
ggplot(data, aes(x = Area_Name, y = Cases_Property_Stolen)) +
  geom_bar(stat = "identity", fill = "skyblue") +
  theme(axis.text.x = element_text(angle = 90, hjust = 1)) +
  labs(title = "Cases of Property Stolen by Area in 2001",
       x = "Area Name",
       y = "Cases of Property Stolen")

# Pie Chart: Proportion of Value of Property Stolen by Area
stolen_values <- data$Value_of_Property_Stolen
area_names <- data$Area_Name

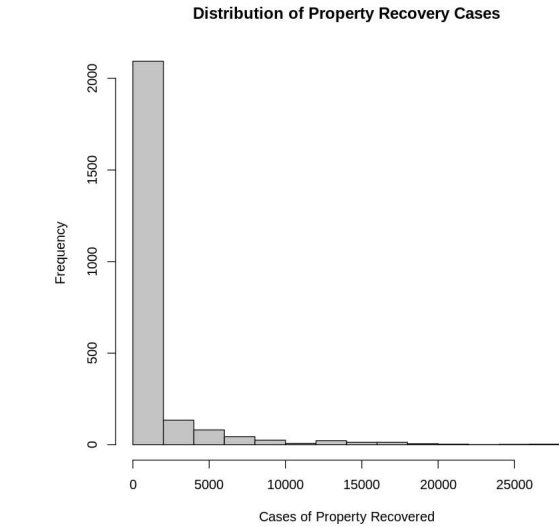
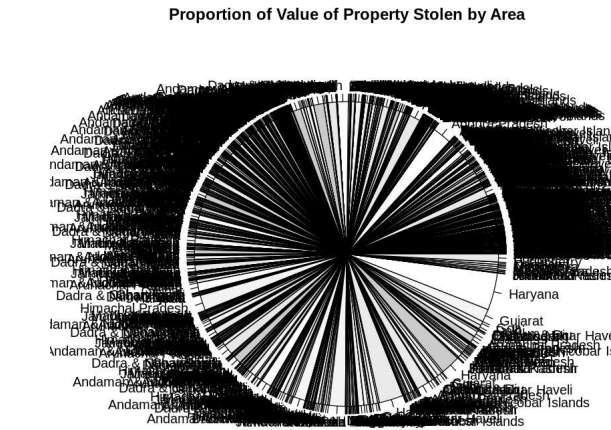
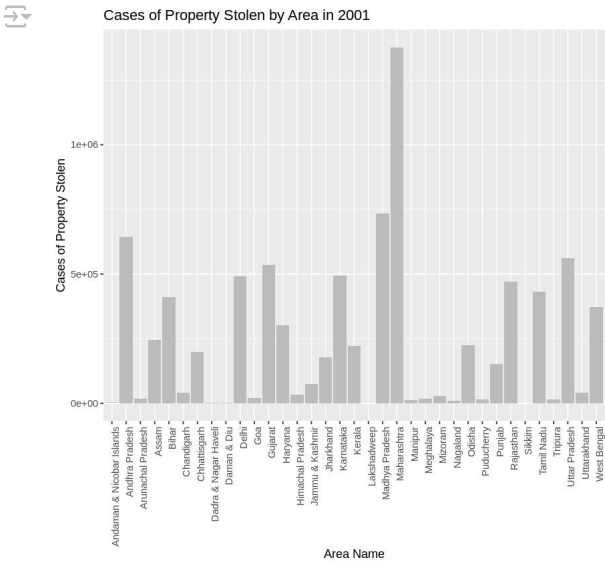
# Handle NA values and filter out zero values
stolen_values[is.na(stolen_values)] <- 0
stolen_values <- as.numeric(stolen_values)
stolen_values <- stolen_values[stolen_values > 0]
area_names <- area_names[stolen_values > 0]

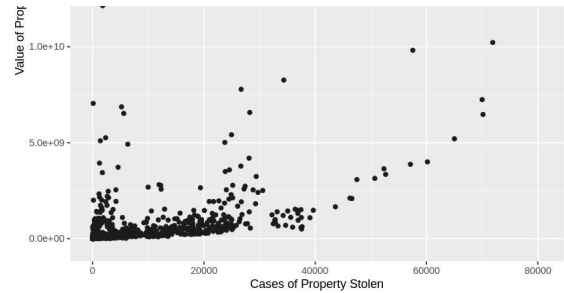
# Create pie chart
pie(stolen_values, labels = area_names, main = "Proportion of Value of Property Stolen by Area")

# Histogram: Distribution of Cases Property Recovered
hist(data$Cases_Property_Recovered,
     breaks = 10,
     col = "lightgreen",
     main = "Distribution of Property Recovery Cases",
     xlab = "Cases of Property Recovered")

# Scatter Plot: Relationship between Cases and Value of Property Stolen
ggplot(data, aes(x = Cases_Property_Stolen, y = Value_of_Property_Stolen)) +
  geom_point(color = "blue") +
  labs(title = "Relationship between Cases and Value of Property Stolen",
       x = "Cases of Property Stolen",
       y = "Value of Property Stolen")

# Bubble Plot: Cases Stolen, Recovered, and Value Stolen
ggplot(data, aes(x = Cases_Property_Stolen,
                 y = Cases_Property_Recovered,
                 size = Value_of_Property_Stolen)) +
  geom_point(alpha = 0.5, color = "purple") +
  labs(title = "Bubble Plot: Property Stolen vs. Recovered",
       x = "Cases of Property Stolen",
       y = "Cases of Property Recovered") +
  scale_size_continuous(range = c(3, 15))
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Bubble Plot: Property Stolen vs. Recovered

