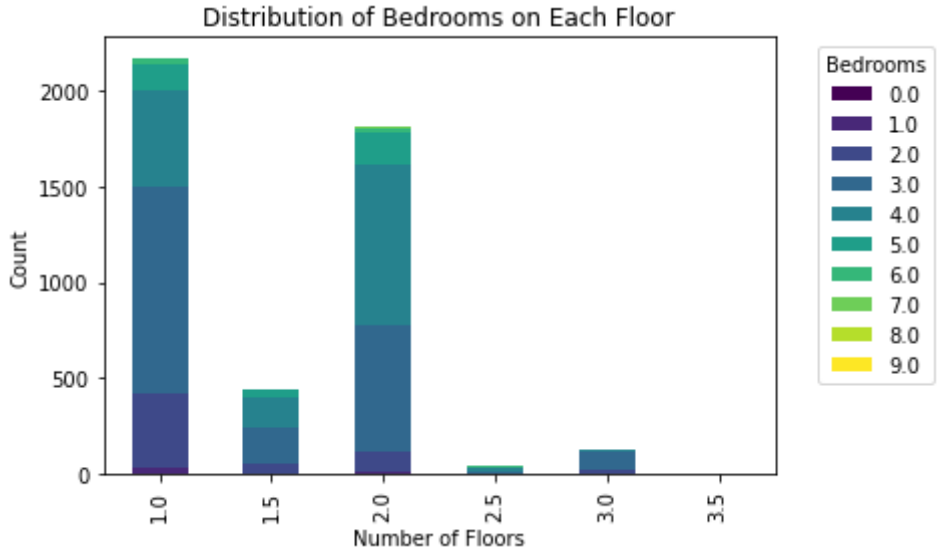
Stacked Bar chart

Reason:

Stacked bar plots are employed to effectively visualize the distribution of multiple categorical variables within a single overarching category. By stacking different segments on top of each other, these plots provide a clear representation of the contribution of each subcategory to the whole, facilitating comparisons and revealing patterns. This visualization is particularly useful when examining the composition of a total quantity across various dimensions, offering insights into the relative proportions of each category. Stacked bar plots excel in conveying both individual and collective contributions, making them valuable tools for exploring and communicating complex relationships in categorical datasets.



Description of Stacked Bar Chart

The stacked bar chart illustrates the distribution of bedrooms across different floors for a dataset of houses. Each bar represents a specific floor, and the segments within the bars correspond to the number of bedrooms on that floor. The x-axis denotes the floors, while the y-axis represents the cumulative count of bedrooms.

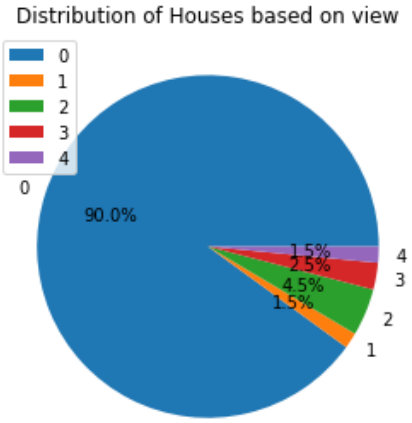
Insights:

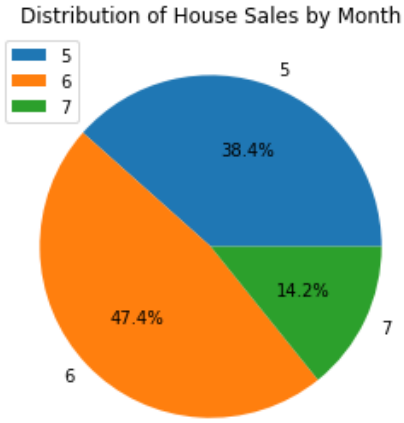
- The majority of houses have a concentration of bedrooms on the first floor, with a notable decrease on the second floor.
- Floors with a significant number of bedrooms typically include the first and second floors.
- The chart provides a clear visual representation of the bedroom distribution, allowing for easy comparison across different floors.
- A legend is provide at right side to show the bedrooms in each floor.

Pie Plots

Reason:

The decision to use pie charts is well-justified as it aligns with the categorical nature of the data being presented. Pie charts are particularly suitable for illustrating the proportional distribution of categories, making them an optimal choice for conveying the distribution of houses based on view ratings and the distribution of house sales by month. This deliberate choice enhances the audience's ability to quickly grasp the composition and patterns within these categorical variables.





Description of Pie Plot:

The pie plot provides a visual representation of the distribution of houses based on their view ratings and the distribution of house sales by month.

Distribution of Houses based on View:

- The pie chart illustrates the distribution of houses categorized by their view ratings (0 to 4).
- Each slice corresponds to a specific view rating, representing the proportion of houses in that category.
- The autopct parameter adds percentage labels to each slice, offering a quick glance at the percentage composition.
- Different colors are used to visually distinguish between the view ratings.
- A legend in the upper left corner labels each view rating, enhancing interpretability.
- The title "Distribution of Houses based on View" provides a clear context for the chart.

Distribution of House Sales by Month:

- The second pie chart visualizes the distribution of house sales across different months.
- Each slice represents a specific month, indicating the proportion of house sales during that time period.

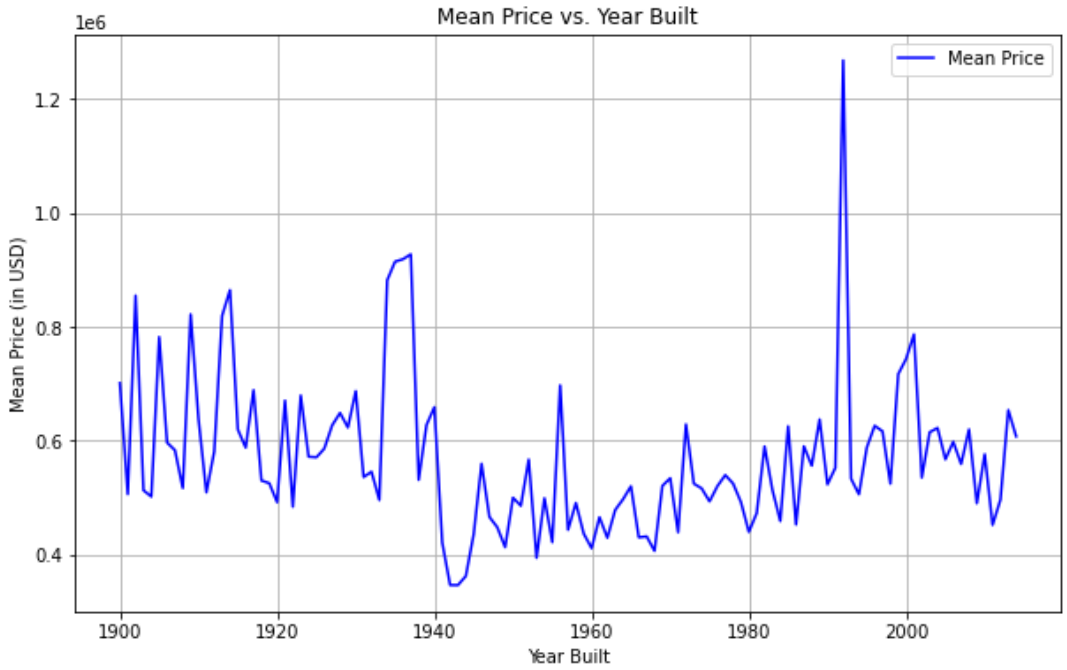
- The autopct is employed to display the percentage of house sales in each month, aiding in quantitative understanding.
- Distinct colors are utilized for each month, aiding in easy differentiation.
- A legend in the upper left corner labels the months, facilitating clear identification.
- The title "Distribution of House Sales by Month" succinctly conveys the focus of the chart.

These pie charts efficiently convey the categorical distributions within the dataset, offering a quick and intuitive overview of how houses are distributed based on view ratings and how house sales vary across different months. The use of colors, legends, and titles enhances the interpretability and communicative power of the visualizations.

Line Plots

Reason:

Line plots are valuable for visualizing trends and patterns over a continuous variable, making them an ideal choice for depicting the relationship between mean house prices and the year they were built. This type of plot enables a straightforward representation of how the average price has evolved over time, providing a clear visual narrative of any temporal trends or fluctuations.



Description of Line Graph:

The provided line graph illustrates the mean house prices over time, specifically focusing on the relationship between the year a house was built and its corresponding mean price. The x-axis denotes the years in which houses were constructed, while the y-axis represents the mean prices in USD. Each point on the line graph represents the average price for houses built in a particular year.

Insights:

- The upward or downward trend of the line indicates whether there is an overall increase or decrease in mean house prices over the years.
- Fluctuations in the line reveal periods of significant price changes or stability in the housing market.
- The legend distinguishes the line representing the mean price, and the grid enhances readability.

This line graph serves as a concise and informative visualization, allowing viewers to easily grasp the historical trends in mean house prices based on the year of construction.