**Clients Requirements for Dashboard:**

**1. Time-Based Analysis: Average Price of Houses**

* **Objective:** Provide insights into the trend of average house prices over time.
* **Visualization:**
  + **Line Chart**:
    - **Monthly View:** Average price grouped by month.
    - **Daily View:** Average price grouped by day.

**Filters:** Allow users to toggle between monthly and daily views.

**2. Regional Analysis: Average Price by USA Regions**

* **Objective:** Analyze how house prices vary across different regions in the USA.
* **Visualization:**
  + **Map Chart:**
    - Regions color-coded based on average price.
    - Display region name, average price, and the number of listings on hover.

**Filters:** 1. Region dropdown.

2. Price range slider for specific price bands.

**3. Price-wise House Ratings**

* **Objective:** Correlate house ratings with prices.
* **Visualization:**
  + **Heat Map:**
    - Darker the color of the square Better the rating of the house

**Filters:** Adjustable price range slider for dynamic analysis.

**4. Distribution of Number of Bedrooms**

* **Objective:** Show how houses are distributed by the number of bedrooms.
* **Visualization:**
  + **Bar Chart**:
    - X-axis: Number of bedrooms.
    - Y-axis: Count of houses.
* **Filters:** Filters for sqft living and price range.

**5. Distribution of Number of Bathrooms**

* **Objective:** analyze the distribution of houses by bathrooms.
* **Visualization:**
  + **Bar Chart**:
    - X-axis: Number of bathrooms.
    - Y-axis: Count of houses.
    - Tooltip: Display average price and additional metrics.
* **Filters:** Filters for sqft lot and price range.

**6. Filters for Advanced Analysis**

* **Sqft Living:** Range slider for selecting properties within a specific sqft living area.
* **Sqft Lot:** Range slider for properties with specific lot sizes.
* **Built Year:** Year-based filter (single-select or multi-select dropdown).

**7. Built Year Analysis**

* **Objective:** Analyze properties based on their construction year.
* **Visualization:**
  + **Line Chart** or **Bar Chart**:
    - X-axis: Year built.
    - Y-axis: Count of houses or average price.
    - Tooltip: Average price for that year.
* **Filters:** Year range slider for interactive exploration.