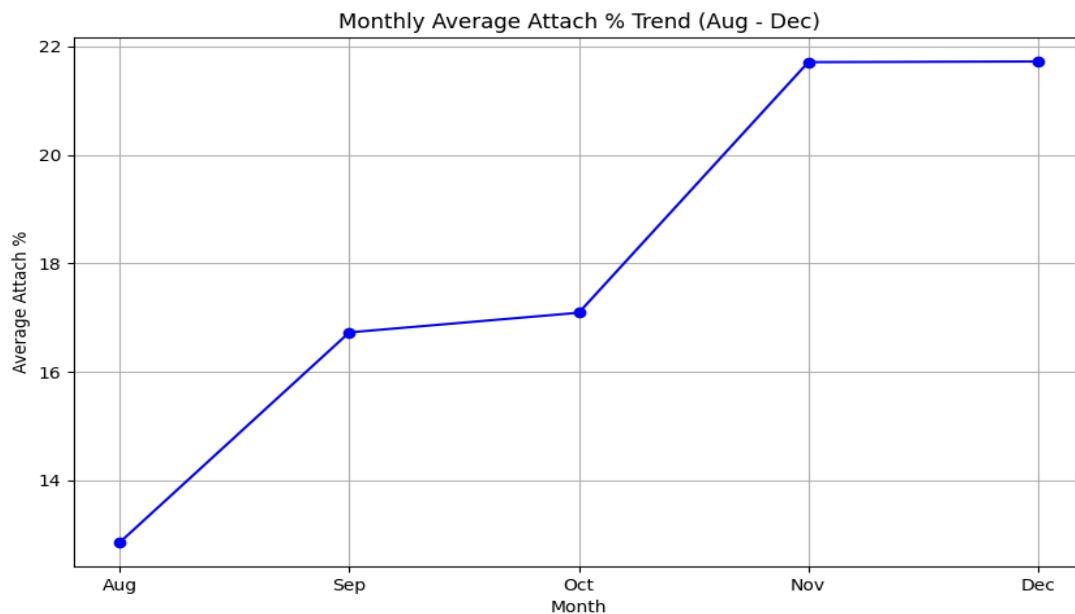


Jumbo & Company – Attach % Analysis & January Prediction

Task 1: Comprehensive Data Analysis Report

1. **Executive Summary:** The overall attach rate for Device Insurance has shown a promising upward trend over the last 5 months, rising from an average of 12.9% in August to 21.7% in December. This indicates successful sales initiatives or increasing customer awareness as the year progressed.
2. **Month-on-Month (MoM) Trend Analysis**
 - **Growth:** The aggregate attach rate has grown month-over-month (~68% increase).
 - **Seasonality/Momentum:** November & December showed the highest performance, likely driven by year-end sales pushes or holiday seasonality

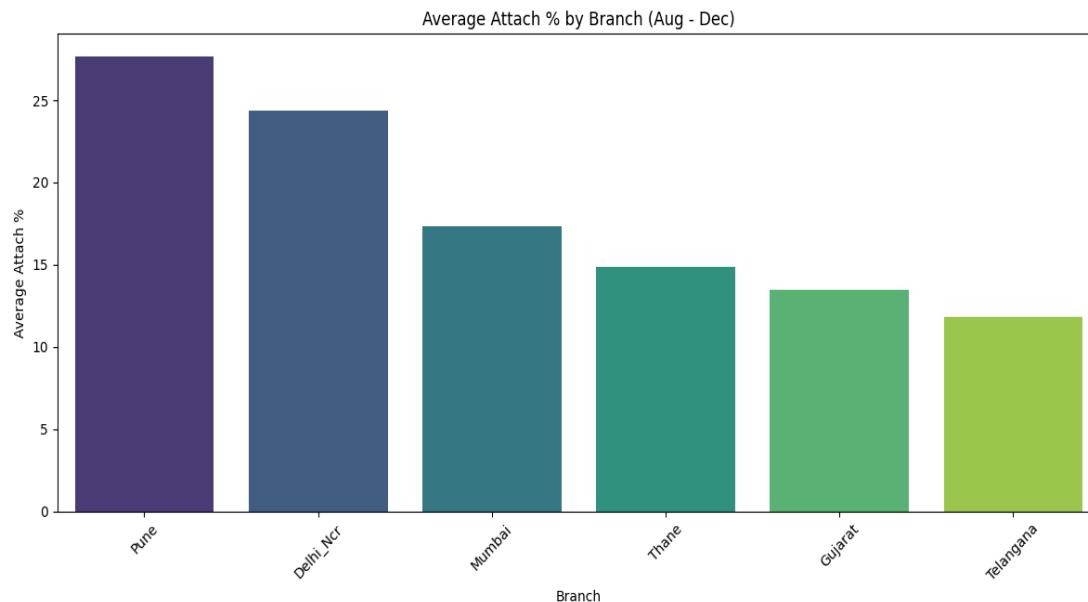


3. Branch Performance Analysis:

reveals distinct performance tiers among branches.

Top Performers: The Pune and Delhi_NCR branches are leading the pack with consistently higher attach rates.

Opportunity Areas: Some branches show lower averages, suggesting a need for targeted training or revised incentives in those regions.

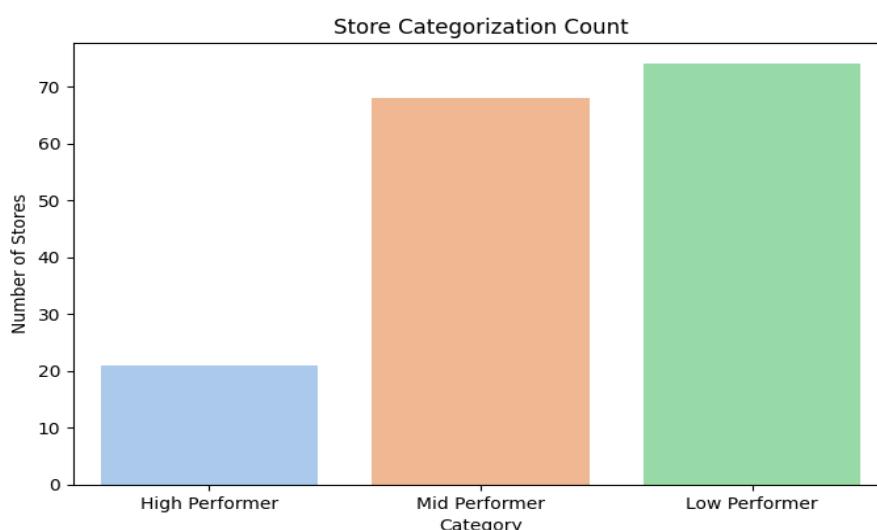


4. Store Categorization & Consistency

To better understand store-level dynamics, I categorized stores based on their 5-month average and stability.

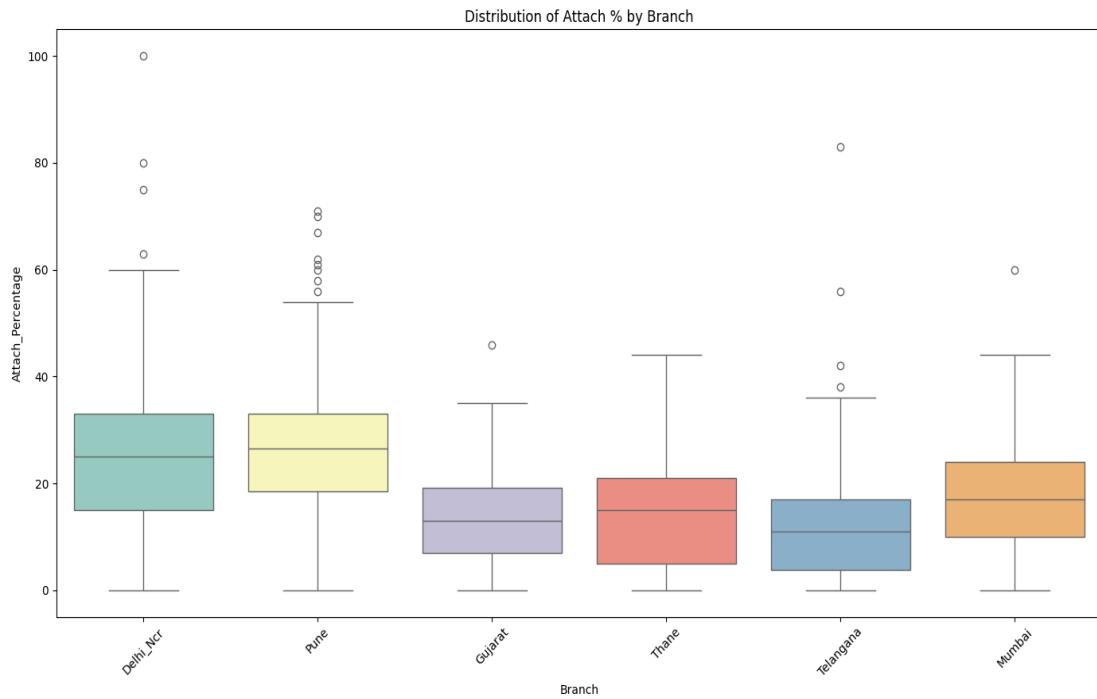
Categorization:

- High Performer (> 30% attach)
- Mid Performers (15–30%)
- Low Performers (0–10%)



Consistency:

- **Consistent Stars:** Stores like Opera House Br (Mumbai) and Up (Noida Sec.18) deliver consistent high performance with low volatility. These are your benchmark stores.
- **Volatile Growers:** Stores like Haryana (M G Road) show massive growth (3% to 100%) but high volatility. These require monitoring to ensure the growth is sustainable and not just a data anomaly or one-off bulk deal.



5. Deep Insights

- **Insurance attach % increases by (~70%) from Aug → Dec**

This shows strong seasonality.

Recommendation: Push maximum insurance campaigns pre-festive (Sep–Oct).

- **Branch-level strategies needed**

Recommendation: Delhi NCR and Pune can be used as training hubs to uplift low-performing branches.

- **Some stores show unbelievable numbers (e.g., 80–100%)**

Recommendation: These may need Data validation & Audit

Task 2: January Forecast Strategy

➤ To predict the January attach %, I evaluated several time-series forecasting techniques suitable for short-duration data (5 data points).

➤ **Three Suggested Approaches**

1. **Simple Moving Average (SMA - 3 Months):** Takes the average of Oct, Nov, and Dec.

- **Pros:** Smooths out short-term noise.
- **Cons:** Lags behind trends (e.g., if growth is accelerating, SMA will under-predict).

2. **Weighted Moving Average (WMA):** Assigns higher weights to recent months (e.g.,

Dec=50%, Nov=33%, Oct=17%).

- **Pros:** Captures recent momentum while still smoothing noise. Highly effective for retail data.
- **Cons:** Weights are subjective and Treats all stores the same way.

3. **Linear Trend Projection:** Fits a regression line to the 5-month history to project January.

- **Pros:** Captures strong upward/downward trends.

➤ **Which of the following method are we using?**

For store-wise January attach %, predictions are made using Linear Regression which is the most appropriate method for short historical data (Aug–Dec)

➤ **Why Linear Regression was chosen**

- The dataset contains only 5 months of historical data, which is limited for advanced time-series models.
- Attach % for most stores shows a gradual upward or stable trend rather than random fluctuations.
- Linear Regression learns the trend mathematically from the data itself.
- Linear Regression is:
 - Easy to interpret
 - Suitable for short time-series
 - Fits a separate slope for each store
 - Captures individual store behavior

➤ Predicted Result Snapshot :

	Branch	Store_Name	Dec	Predicted_Jan_Attach_%
0	Delhi_Ncr	Delhi(Janakpuri) Br	23.0	18.0
1	Delhi_Ncr	Haryana(Gurgaon) Br	21.0	28.4
2	Delhi_Ncr	Up(Greater Noida) Br	25.0	22.7
3	Pune	Pune(Bhosari) Br	33.0	36.0
4	Gujarat	Ahmedabad(Maninagar) Br	19.0	14.6