

# **ZILLOW HOUSING MARKET FORECAST**

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# STEPS OF ZILLOW ANALYSIS

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1

## SELECTING THE CITIES

- Chose Boston, Austin, San Jose, and Denver to ensure geographic diversity and key housing market representation.
- Selected cities known for rapid growth and tech-driven economies to capture distinct housing trends.

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## COLLECTING THE DATA FROM ZILLOW RESEARCH

- Used comprehensive datasets, including ZHVI (All Homes: SFR, Condo/Co-op) and mid-tier property values.
- Data covered monthly property trends over multiple years for accurate forecasting.

3

## DATA EXPLORATION

- Cleaned and filtered data to focus on the 4 cities and handled missing values.
- Analyzed time-series trends (1996–2024) to understand long-term growth and city-specific patterns.

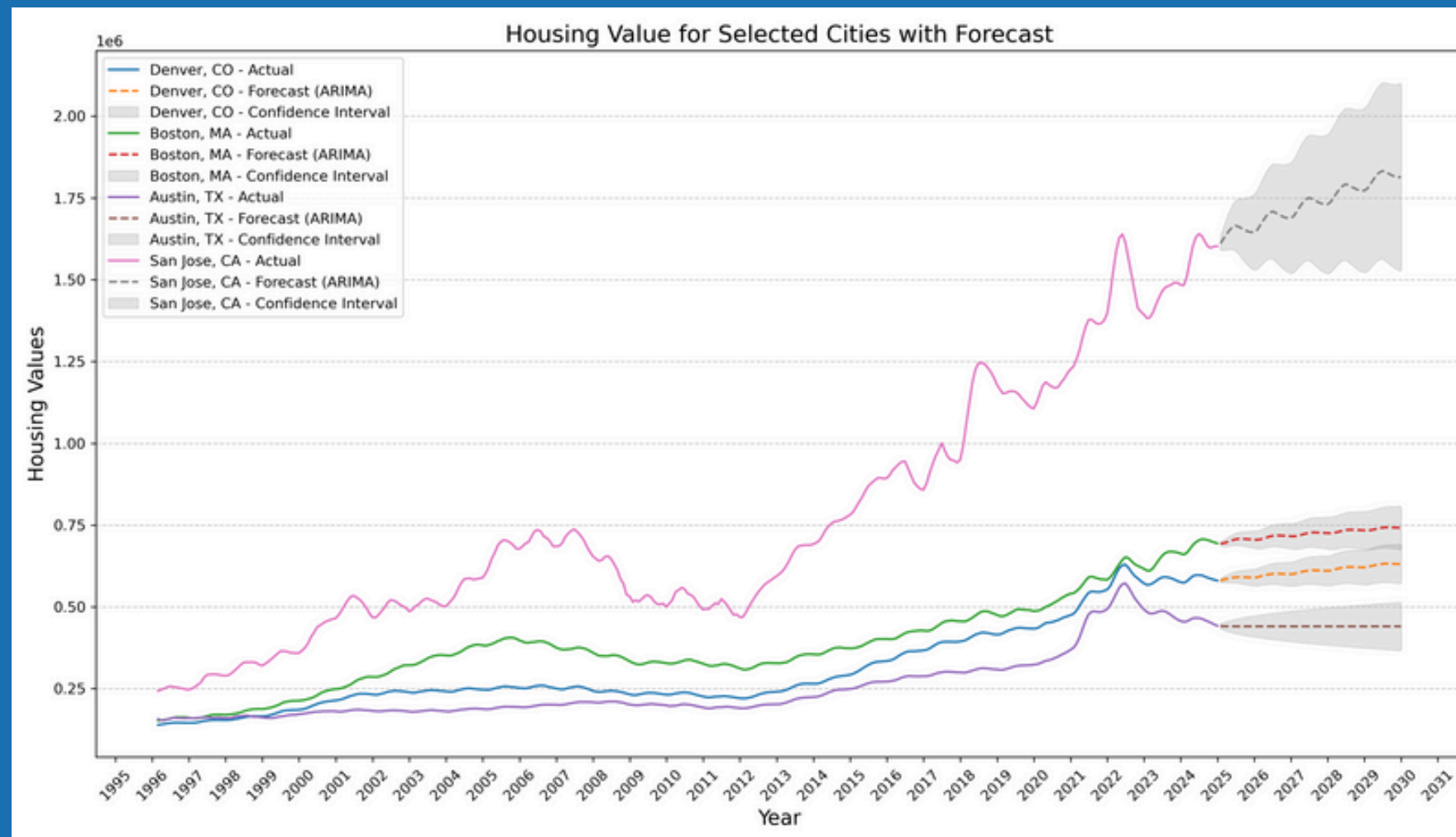
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## FORECASTING

- Evaluated models like Holt-Winters and Auto-ARIMA; selected Auto-ARIMA for accurate trend and seasonality prediction.
  - Forecasted property values for the next 5 years (2025–2029) with confidence intervals.
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# HOUSING MARKET TRENDS AND FORECAST (1996-2029) — SELECTED U.S. CITIES

## HISTORICAL AND CURRENT OVERVIEW



### San Jose, CA:

- Rapid growth (~10%/year) from 1996-2007 due to tech boom and limited housing, followed by a decline (~3%/year) from 2008-2012 due to the financial crisis. Recovery from 2012-2024 (~8%/year) driven by tech and pandemic demand, with growth stabilizing in 2023-2024 as interest rates rise.

### Boston, MA:

- Steady growth (~5-6%/year) from 1996-2007 fueled by biotech and urban development, with minimal decline (~1%/year) from 2008-2012 during the recession. Rebounded from 2012-2024 (~5-7%/year) due to job growth and housing demand, slowing in 2023-2024 due to market stabilization.

### Austin, TX:

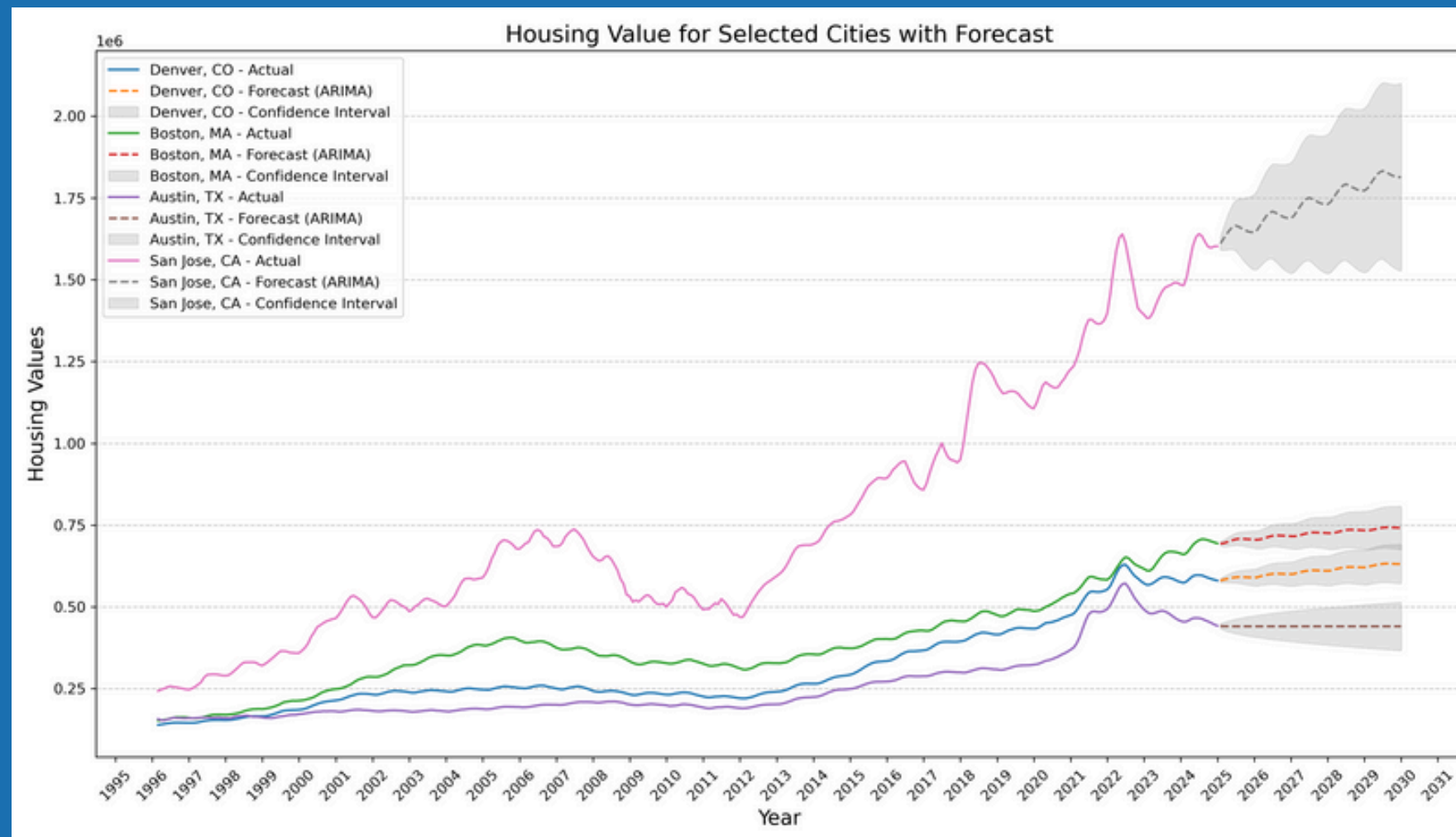
- Housing surged (~12-15%/year) from 2015-2022 as it became a tech hub, but growth flattened in 2023-2024 due to oversupply and affordability issues.

### Denver, CO:

- Steady growth (~8-9%/year) from 2012-2020 driven by job creation and migration, with a pandemic boost in 2020-2022; growth plateaued by 2023.

# HOUSING MARKET TRENDS AND FORECAST (1996-2029) — SELECTED U.S. CITIES

## FORECAST OVERVIEW



### San Jose, CA:

- Projected to grow at a moderate pace (~2-3% annually) due to affordability concerns and rising mortgage rates.
- By 2029, values could exceed \$1.8 million, but the pace will be slower than the previous decade.

### Boston, MA:

- Forecast indicates steady annual growth of ~1.5-2%, driven by stable housing demand and limited inventory.
- By 2029, prices are expected to reach \$750,000-\$800,000, with growth capped by affordability issues.

### Austin, TX:

- Austin faces the highest risk of correction, with prices expected to decline slightly (~1-2% per year) as oversupply pressures persist.
- Prices may fall to \$450,000-\$500,000, though long-term demand could support recovery beyond 2029.

### Denver, CO:

- Minimal growth is expected (~0.5-1% annually) due to affordability concerns and increased housing supply.
- Prices will likely plateau around \$600,000-\$650,000.

# ZILLOW RENTAL PRICE VOLATILITY — SELECTED U.S. CITIES

## San Jose, CA:

- High volatility due to its tech-driven economy. Prices fluctuated sharply, especially during 2020-2021, due to remote work shifts and layoffs.
- Post-2022, volatility has reduced but remains higher than other cities.

## Boston, MA:

- Experienced similar volatility as San Jose due to its finance and tech industries. 2020 saw a major dip, followed by a strong rebound in 2021-2022.
- Price swings have stabilized since 2023, but uncertainty remains.

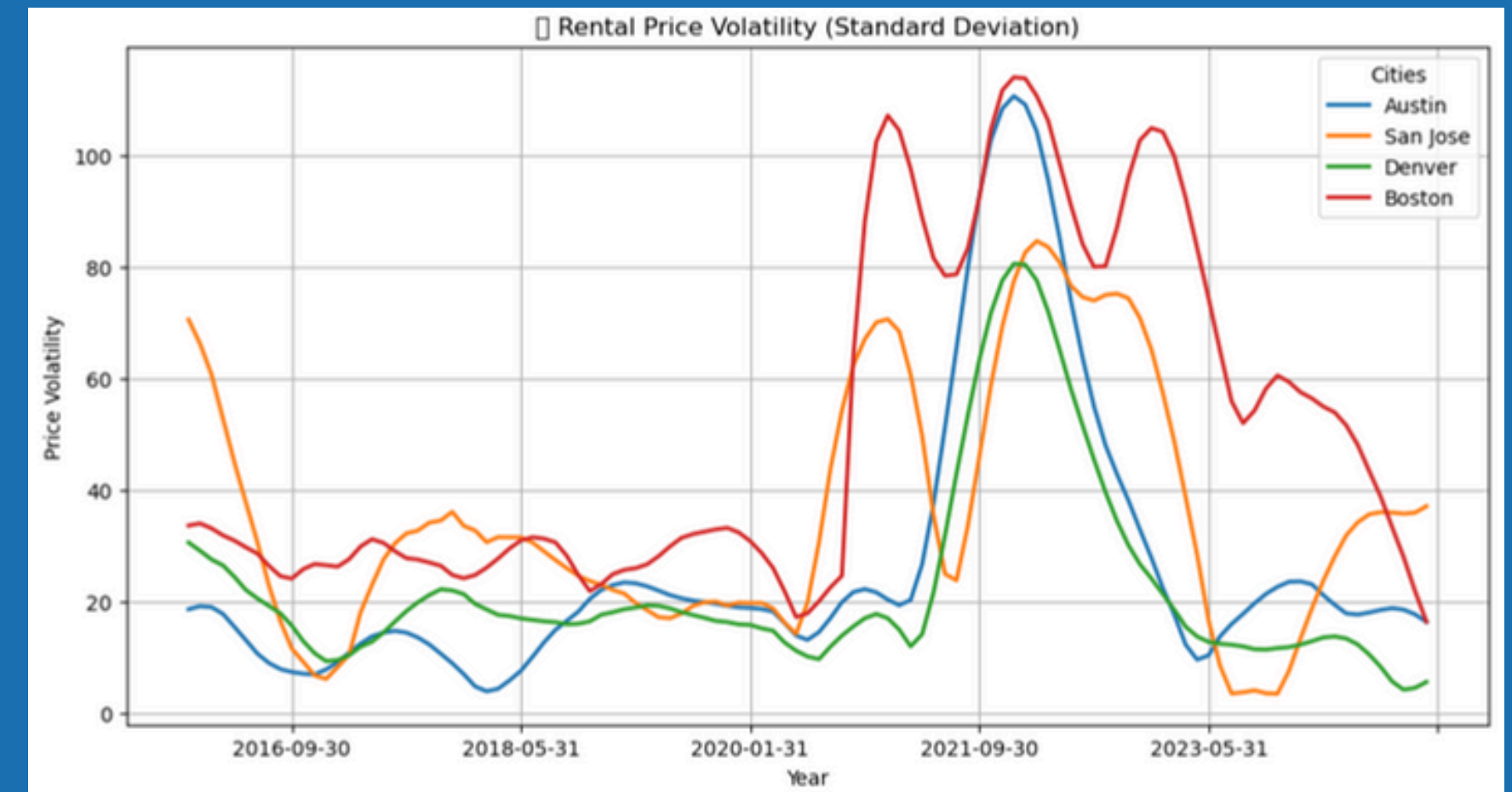
## Denver, CO:

- Volatility spiked in 2021, driven by rapid population growth and rising demand. As more people relocated from coastal cities, rental prices surged.
- After 2022, rental price fluctuations declined, showing increased stability.

## Austin, TX:

- Similar trend to Denver, with a sharp rental price increase in 2021, Fueled by tech industry expansion and corporate relocations.
- 2023 onwards, volatility has settled, making rents more predictable.

## RENTAL PRICE VOLATILITY OVERVIEW

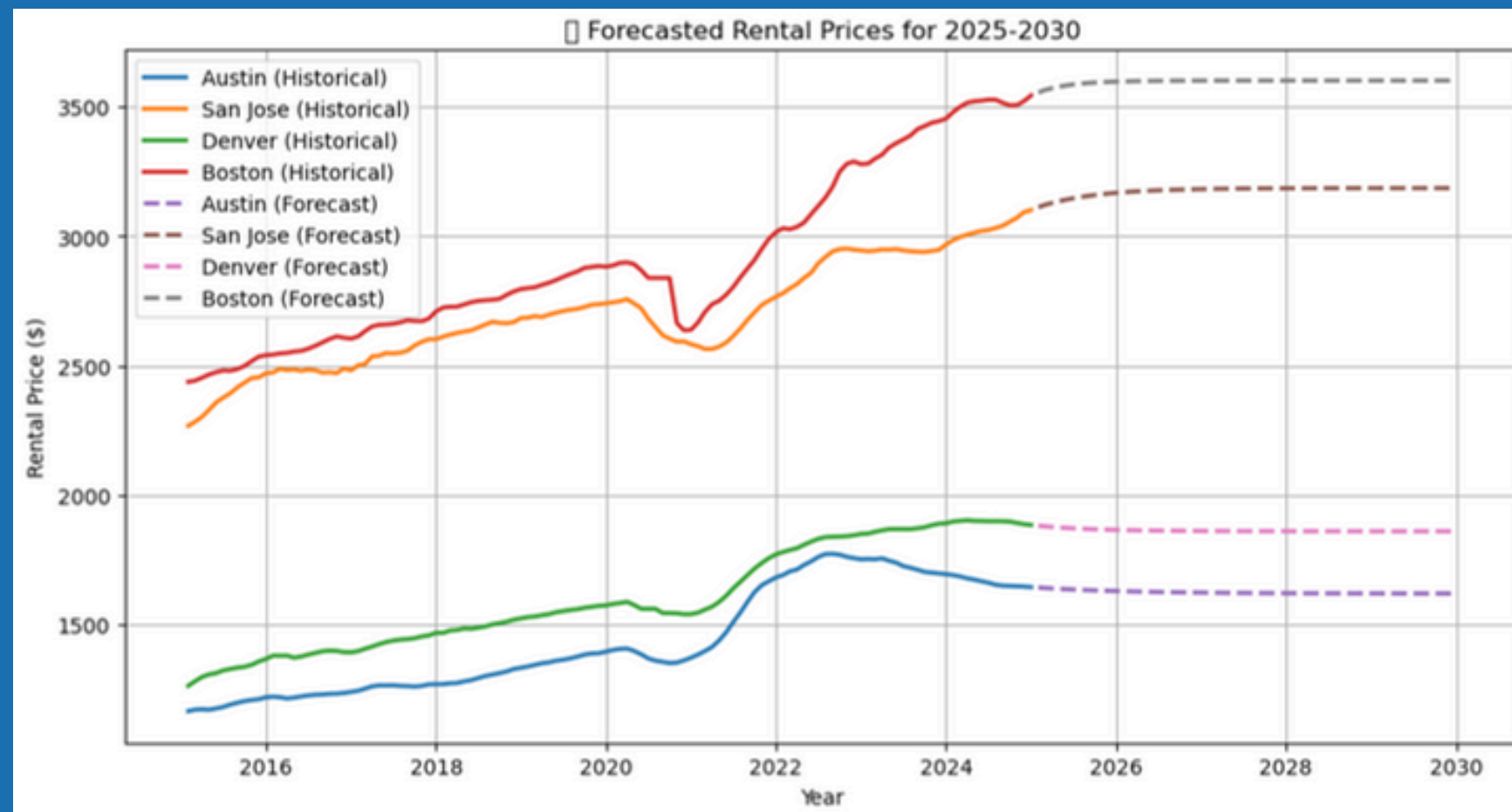




# ZILLOW LONG-TERM RENTAL PRICE TRENDS (2025-2030)

## — SELECTED U.S. CITIES

### RENTAL FORECAST OVERVIEW (TIME-SERIES FORECASTING)



#### San Jose, CA (Most Expensive, Slow Growth)

- 2020-2021: A visible dip due to remote work shifts and tech layoffs.
- Forecast: Rents will rise steadily to ~\$3,700 by 2030 but at a slower pace (~20-25%).

#### Boston, MA (Premium Market, Stable Growth)

- 2020-2021: Slight decline, but recovery was more gradual than San Jose.
- Forecast: Expected to reach ~\$3,600 by 2030, growing at a moderate rate (~18-22%).

#### Denver, CO (High Growth, Increasing Demand)

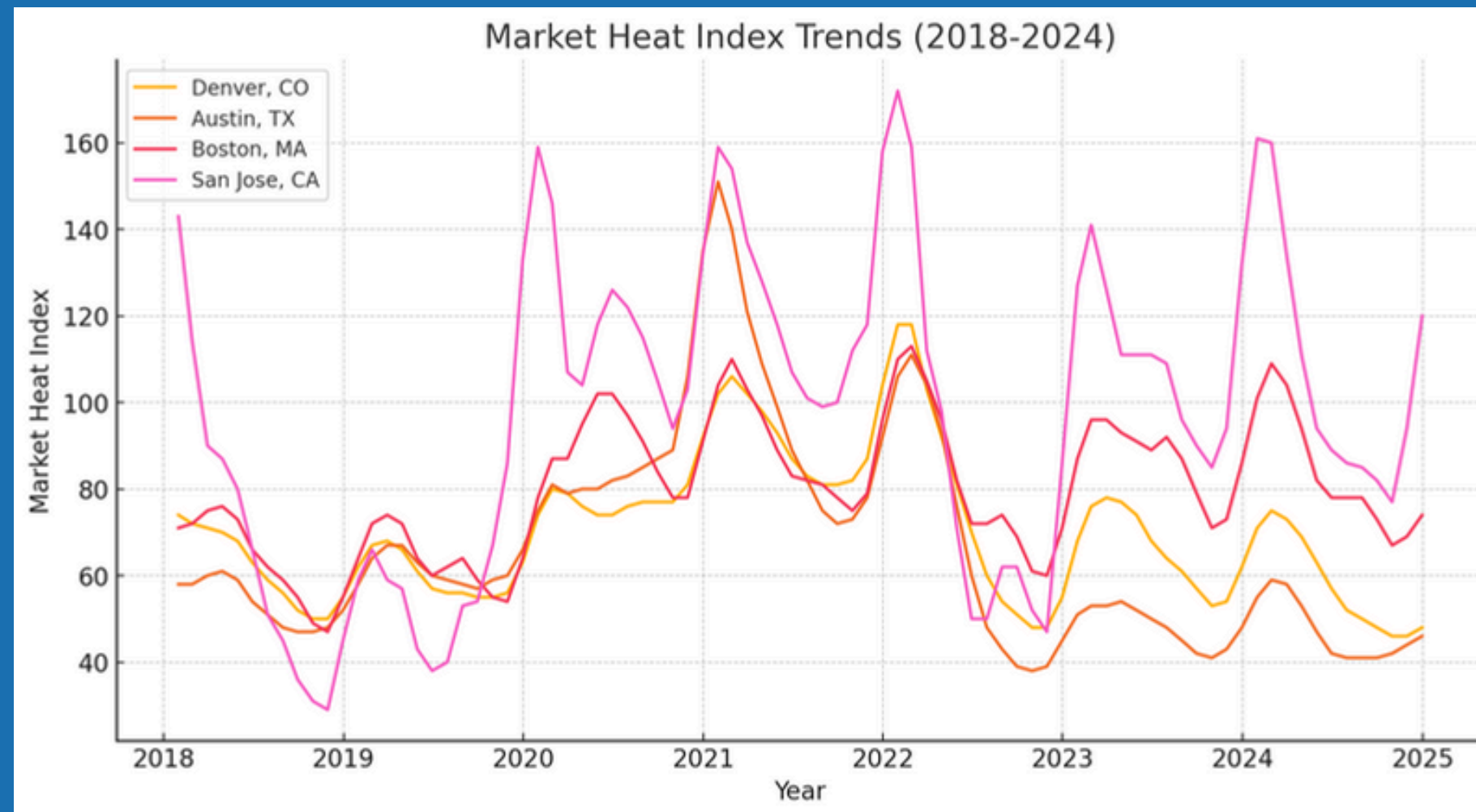
- 2021: Prices spiked as demand surged post-pandemic.
- Forecast: Rents will increase to ~\$2,700 by 2030 (~25-30% growth).

#### Austin, TX (Fastest Growing, Most Affordable but Catching Up)

- 2021-2023: Rapid rent increases due to corporate relocations and migration.
- Forecast: Rents expected to reach ~\$2,600 by 2030, with a 30-35% increase, closing the affordability gap with Denver.

# HOUSING MARKET HEAT INDEX TRENDS (2018 -2024) — SELECTED U.S. CITIES

## MARKET HEAT INDEX



### Denver, CO:

- Market Heat Index remained relatively stable before 2020 but started increasing post-2021 as demand rose.
- Competition is not as aggressive as San Jose or Boston, but affordability concerns are rising.

### Austin, TX:

- Sharp increase in Market Heat Index after 2021, indicating a sudden rise in housing demand.
- Post-2023, demand is cooling off slightly, but affordability concerns persist.

### Boston, MA:

- Gradual increase in Market Heat Index over the years, showing consistent housing demand.
- Peaked in 2022, reflecting high competition, but has stabilized at high levels.

### San Jose, CA:

- Most volatile Market Heat Index, indicating extreme fluctuations in housing demand.
- Remains the most competitive housing market, with demand spikes even in economic downturns.

# NEW HOMEOWNER AFFORDABILITY (2018 -2024) — SELECTED U.S. CITIES

## Denver, CO:

- Historically affordable, with affordability below 30% threshold until 2022.
- Affordability has declined post-2020, now nearing 32-35%, making homeownership harder.

## Austin, TX:

- Affordable pre-2020, staying under 30% of income spent on housing.
- Sharp affordability decline after 2021, now fluctuating between 30-35%, similar to Boston's past trends.

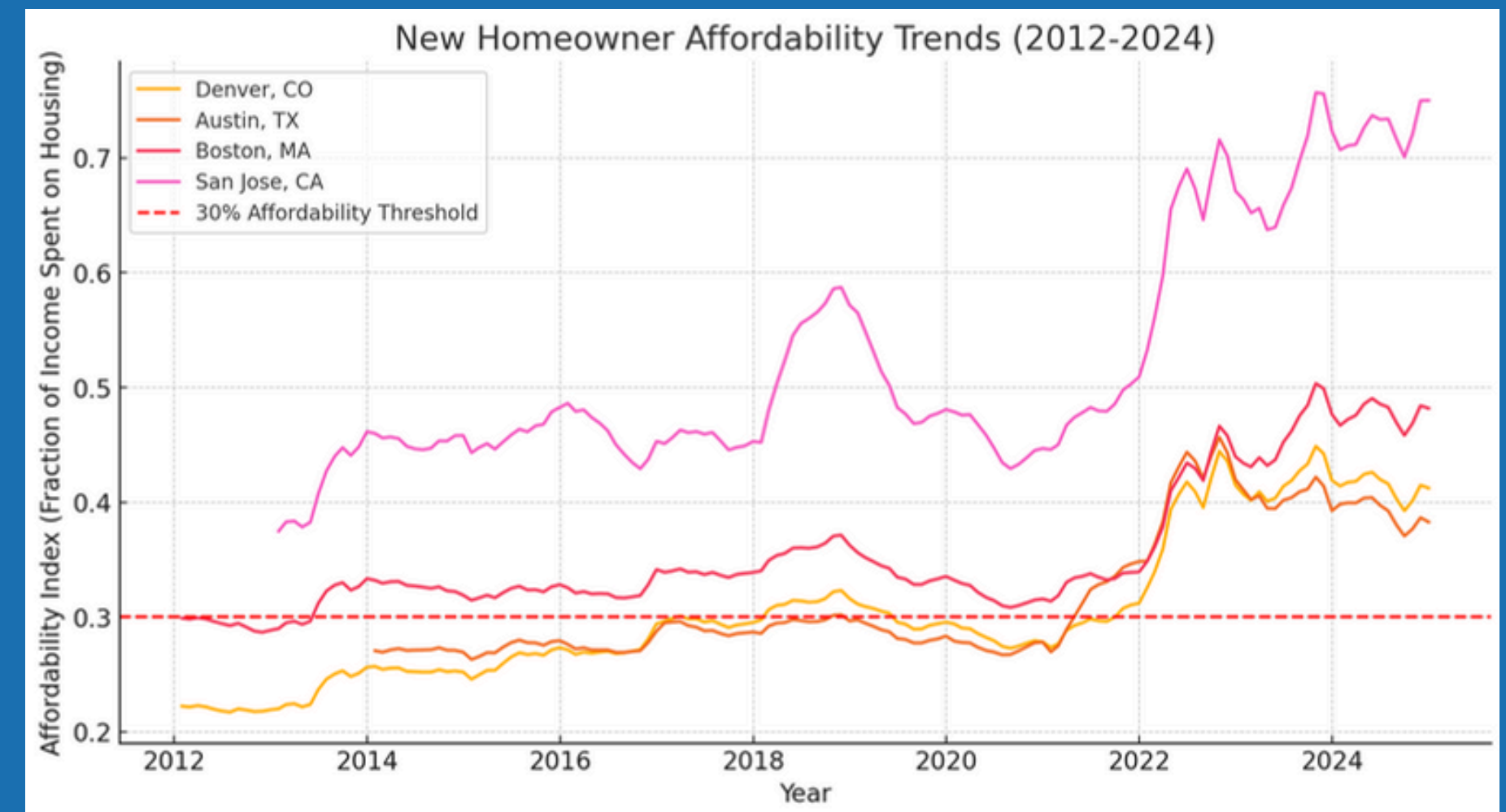
## Boston, MA:

- Steady decline in affordability over the past decade, now consistently between 35-45% of income spent on housing.
- Affordability issues are driven by rising home prices and limited supply, making it difficult for middle-income buyers.

## San Jose, CA:

- The least affordable market, consistently above 50% affordability index.
- Post-2021 affordability worsened further, indicating severe housing cost burdens for homeowners.

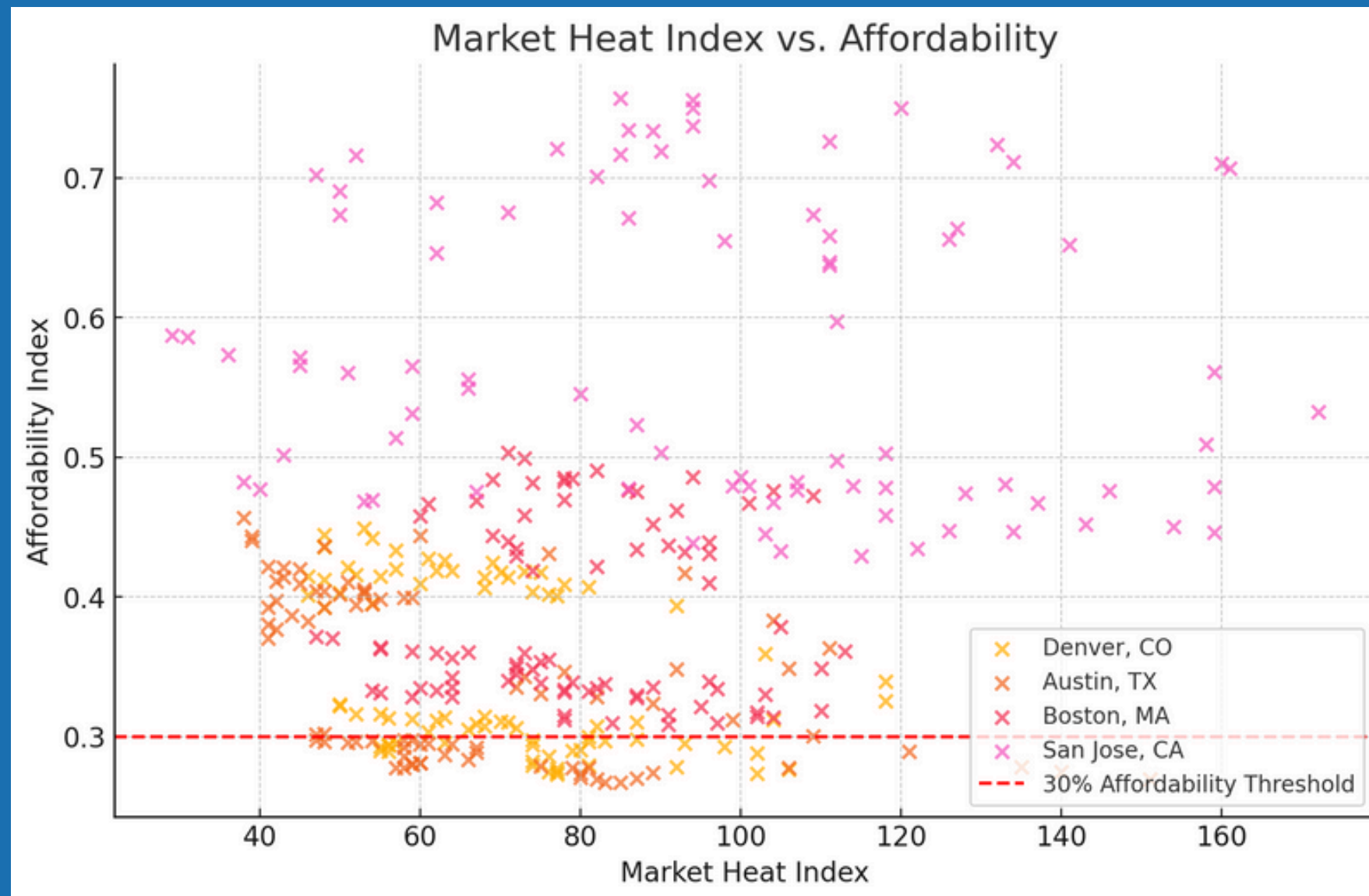
## AFFORDABILITY TRENDS





# MARKET HEAT INDEX VS. AFFORDABILITY (2018 -2024) — SELECTED U.S. CITIES

## MARKET HEAT INDEX VS. AFFORDABILITY



### Denver, CO:

- Moderate increase in Market Heat Index, but affordability is still better than high-cost cities.
- Rising demand may push affordability past sustainable levels in the coming years.

### Austin, TX:

- Affordability is declining at a faster rate than Denver, with increasing housing demand and supply constraints.
- Market corrections may slightly improve affordability, but long-term trends suggest rising housing costs.

### Boston, MA:

- Housing demand remains high, making affordability a growing issue.
- The trend suggests affordability will continue to decline unless wages grow at the same pace as home prices.

### San Jose, CA:

- Highest Market Heat Index + highest affordability burden, making it one of the most difficult places to buy a home.
- No significant improvement in affordability is expected without major policy interventions.

# SALES TO INVENTORY RATIO (2018 -2024) — SELECTED U.S. CITIES

## San Jose, CA (Seller's Market)

- Consistently higher ratio, meaning more homes sell compared to available inventory. High demand, low supply leads to strong competition among buyers.
- Even when the ratio dipped (2020-2021), it rebounded quickly, suggesting a **high-pressure market**.

## Boston, MA (Balanced Market)

- More stable than other cities, with moderate peaks and dips. This suggests equilibrium between demand and available homes.
- Buyers and sellers both have opportunities, making it a neutral market.

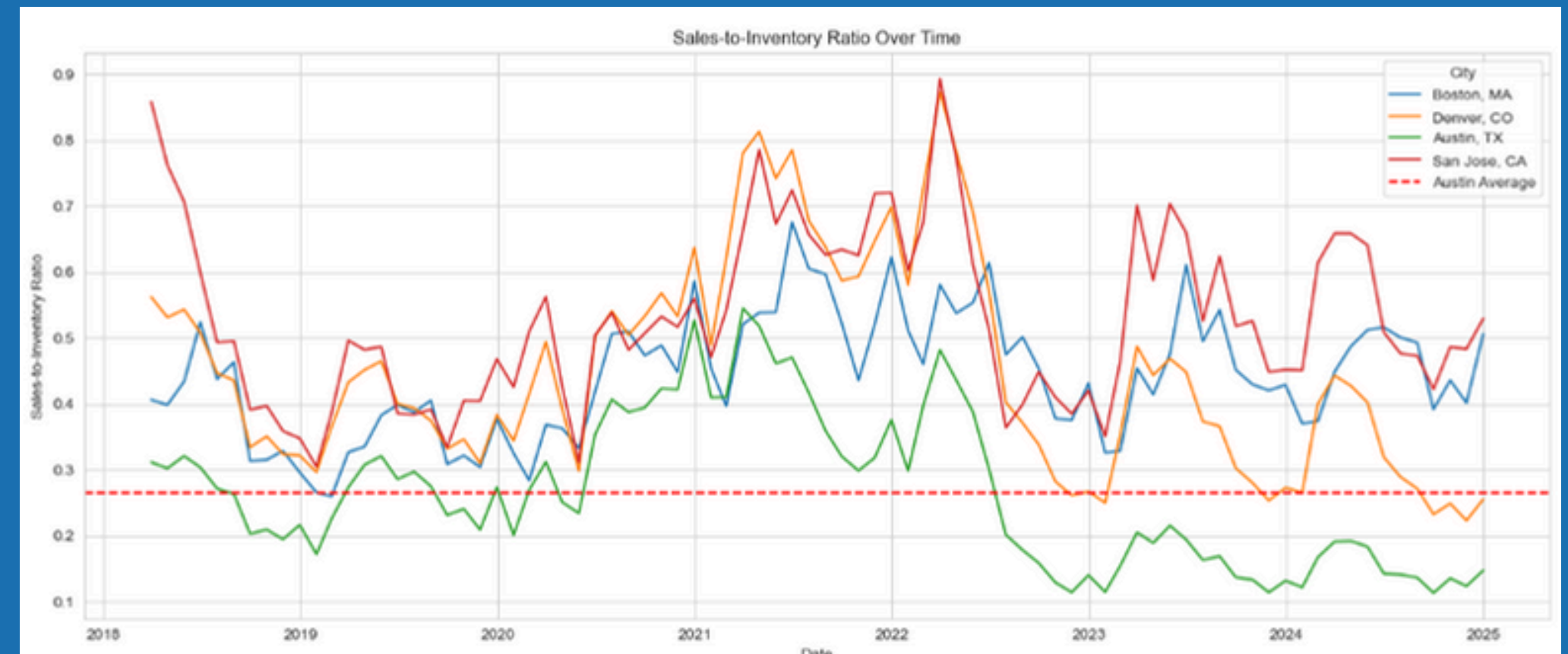
## Denver, CO (Transitioning Market)

- Peaked in 2021-2022, but is now declining, indicating a cooling market. Could move from a seller's market to a balanced market if the trend continues. If inventory keeps rising, buyers will gain more leverage.

## Austin, TX (Buyer's Market)

- Lowest ratio among all cities → More inventory, less buyer competition. After 2022, the ratio dropped significantly, meaning more supply than demand. Key takeaway: Buyers have the upper hand in Austin, making negotiations easier.

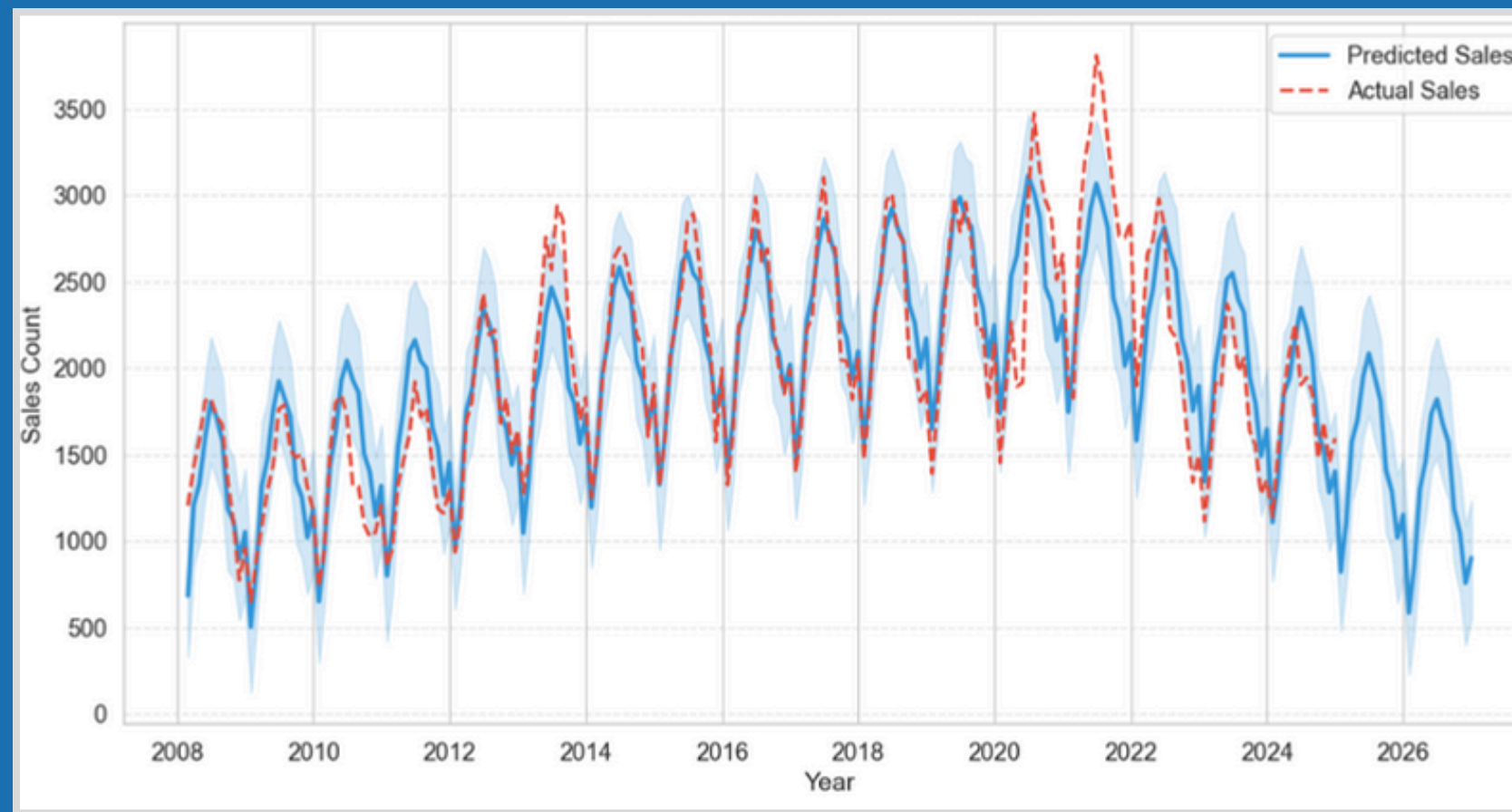
## SALES TO INVENTORY RATIO(TIME-SERIES)



\*Ratio of sales to available homes (Higher = Seller's Market, Lower = Buyer's Market)

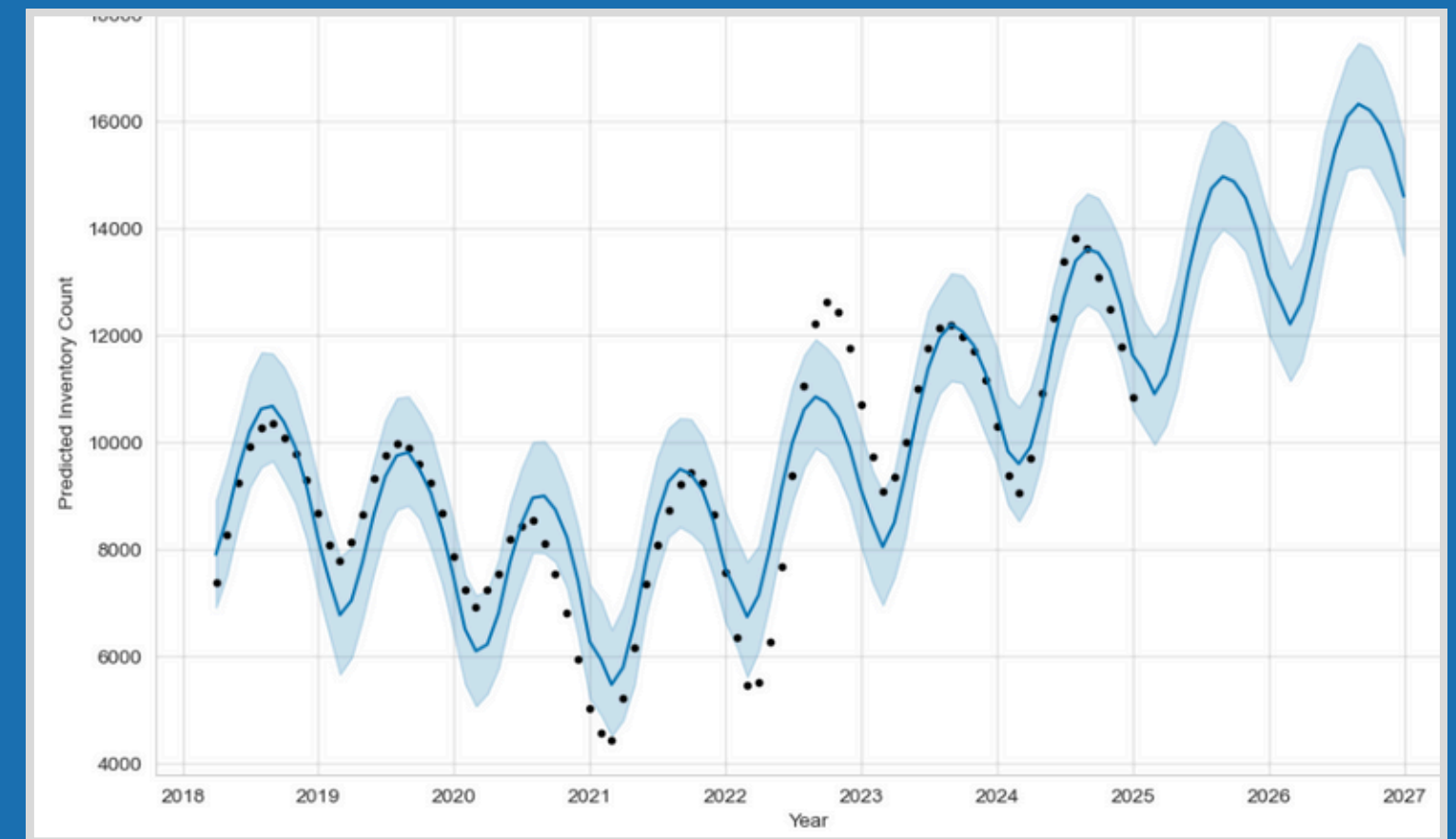
# SALES TO INVENTORY RATIO FORECAST (2024-2027) — AUSTIN, TX

## SALES FORECAST



- Seasonality remains strong → Home sales still fluctuate predictably.
- Sales peaked in 2022 but are now declining → Indicating a market cooldown.

## INVENTORY FORECAST



- Inventory is steadily increasing → Suggesting a transition to a buyer's market.
- More inventory means better deals and less competition.

**Future Outlook: If trends continue, Austin is NOT heading towards a homelessness crisis: more supply, lower competition, and potential price stabilization suggest a healthier market for buyers.**



# KEY INSIGHTS

## HOUSING MARKET TRENDS

- San Jose & Boston: Expensive, high-growth, low affordability markets.
- Austin & Denver: Transitional markets, cooling down with price stabilization.
- Mortgage rates & demand fluctuations impact long-term affordability.

## RENTAL PRICE TRENDS

- San Jose & Boston: High and stable rents (~\$3,000+ by 2030).
- Denver & Austin: Fastest-growing rental costs, catching up with demand.

## AFFORDABILITY TRENDS

- San Jose: 50%+ income on housing (worst affordability).
- Boston & Austin: 35-45% affordability burden.
- Denver: Affordability worsening post-2022 (now ~32-35%).

## MARKET HEAT INDEX & INVENTORY TRENDS

- San Jose: Most competitive, extreme fluctuations.
- Austin & Denver: More inventory, better deals, transitioning to a buyer's market.
- More homes available = less competition, better affordability prospects.





# SO ARE WE HEADING FOR A HOMELESSNESS CRISIS?

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## NOT IMMINENT, BUT A CHALLENGE

- Market is transitioning, with price corrections & inventory growth helping affordability.
- Austin & Denver offer hope, shifting to buyer-friendly conditions.
- San Jose & Boston remain unaffordable, requiring policy interventions to prevent long-term issues.
- Homeownership is getting harder, and without wage growth, affordability will stay a challenge.

## FUTURE OUTLOOK

- No immediate homelessness crisis, but rising costs demand action.
- Affordability will be a long-term issue unless wage growth, policy changes, and housing supply improve.
- The best opportunity for buyers: Austin & Denver in the next 5 years.







# THANK YOU!

Our analysis provided key insights into housing market trends, rental price dynamics, and affordability challenges, forecasting trends from 2025 to 2030. While a homelessness crisis is not imminent, affordability remains a growing concern, especially in high-cost cities like San Jose and Boston, whereas Austin and Denver present more opportunities for buyers and investors. Moving forward, continuous market analysis and policy interventions will be crucial in addressing housing affordability, ensuring sustainable growth. We appreciate everyone's contributions and look forward to further discussions and collaborations to navigate the evolving housing landscape.