

Case Study

Analysis of Price Trends and Urgency Messaging for Agoda

Exploring Price Movement and Business
Opportunity

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Introduction

A Product Owner (PO) would like to implement an urgency message on the website such as:

Prices have been rising. Book now to lock in your rates!

Your check-in is fast approaching. Book now to lock in our rates!

Key Question : Should the urgency message focus on price increases or other factors?

Dataset Summary



- **Booking Dates:** August to December 2016
- **Check-in Period:** October to December 2016

Cities: Five cities (sampled data)



- **Data Fields:** ADR (Average Daily Rate), Check-in Date, Booking Date, Star Ratings, Accommodation Type, etc.



Limitations: Limited timeframe and no data on competitors or customer profiles.



Key Finding 1 - Price Trends Vary by City and Accommodation Type

Insight:

- **City A:** No significant price increase was observed as the check-in date approached. Prices for hotels in this city remained stable or even declined, contradicting the urgency message hypothesis.
- **City B:** Price increases were observed for certain accommodations:
 - **Apartments:** Price rise closer to check-in.
 - **Resort Villas:** Notable price increases in **November and December**.
 - **Bungalows:** Also saw price hikes in **November and December**.
- **City C:** **Ryokan** accommodation type saw price increases in **November**.
- **Support for the "prices rising" message:**
 - In **City B** for certain accommodation types (Apartments, Resort Villas, and Bungalows), prices **do rise** as check-in approaches, especially in **November and December**.
 - In **City C**, a similar price increase was observed for **Ryokan** in **November**.
 - **Recommendation:** Implement urgency messages for these specific accommodation types during periods where price increases are evident.
 - In **City A**, and other accommodations in City B and C, prices remain stable or decline, making the "prices rising" message less effective.
 - **Recommendation:** Use an alternate urgency message like "Your check-in is fast approaching. Book now!" for areas with stable pricing to encourage early booking without misleading customers.

Recommendations

Conclusions & Recommendations: (Exec Summary)

- **Targeted Urgency Messaging:** The "prices rising" message should be used **selectively** for specific accommodation types and cities (e.g., Apartments in City B or Ryokans in City C during high-demand months like November and December). This ensures relevance and avoids eroding user trust.
- **Alternative Messaging:** For regions and accommodations where prices remain stable (e.g., City A), use a message focused on **availability** or **approaching check-in dates** rather than pricing.
- **Placebo Test:** Implement A/B testing to evaluate if urgency messages, even where prices don't rise, increase bookings. Track whether urgency messaging leads to earlier or more frequent bookings and how it impacts user trust.

Alternate Urgency Message - Focus on Availability

- **Insight:** Majority of bookings occur within 10 days of check-in, likely influenced by last-minute availability rather than price concerns.
- **Recommendation:** Use messages like "Limited rooms available!" or "Only X rooms left for your dates!"

Recommendations for Urgency Messaging Placement

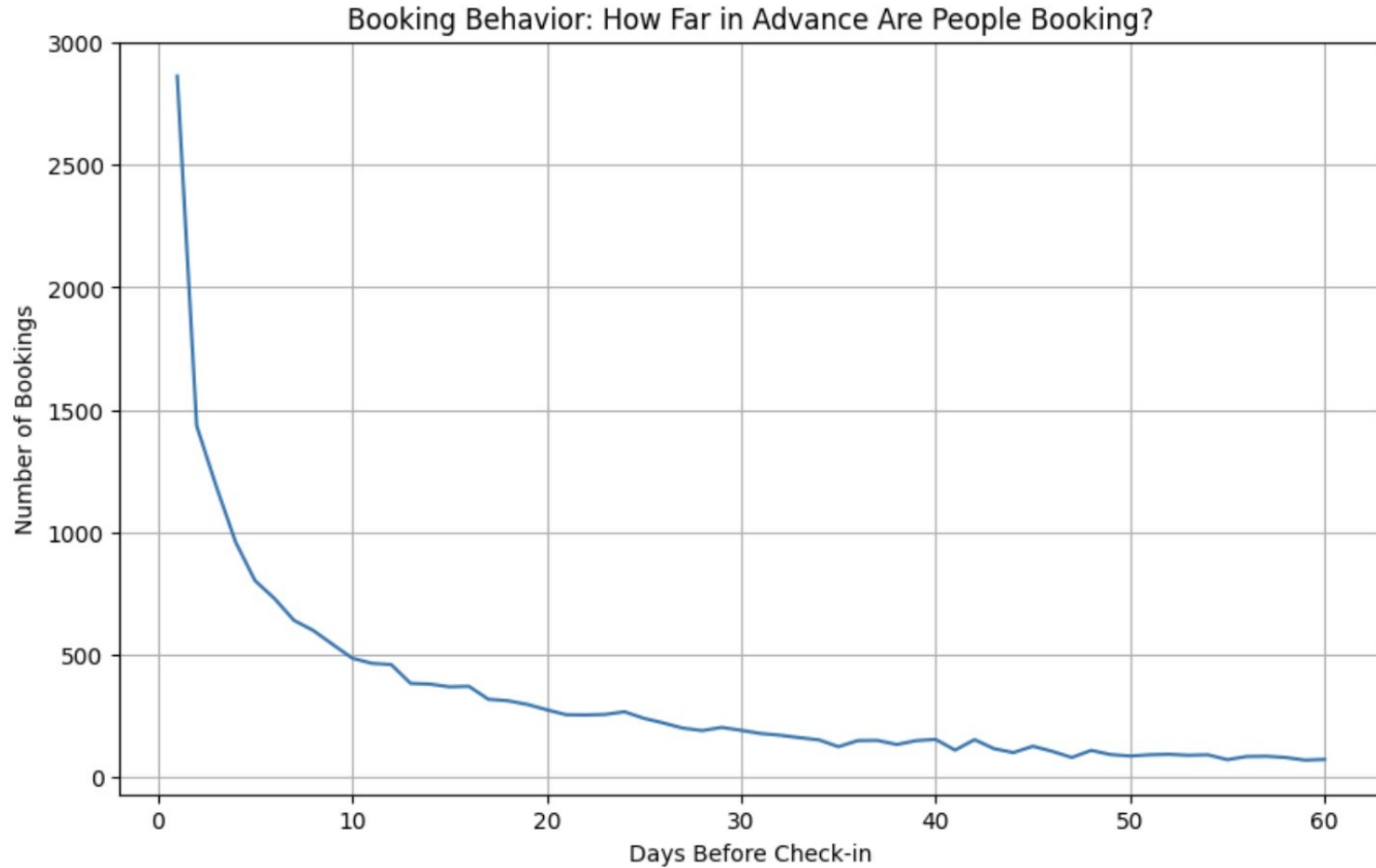
- **Where to Implement:**
 - **Search Results Page:** Encourage users early in their journey.
 - **Property Page:** Reinforce urgency based on real-time availability.
- **Why:** These are the stages where users are comparing options and making decisions.



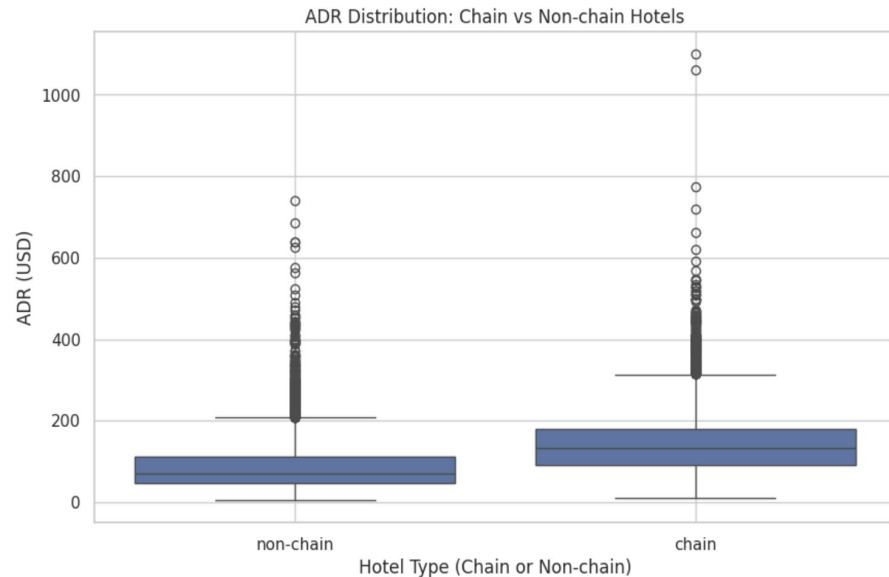
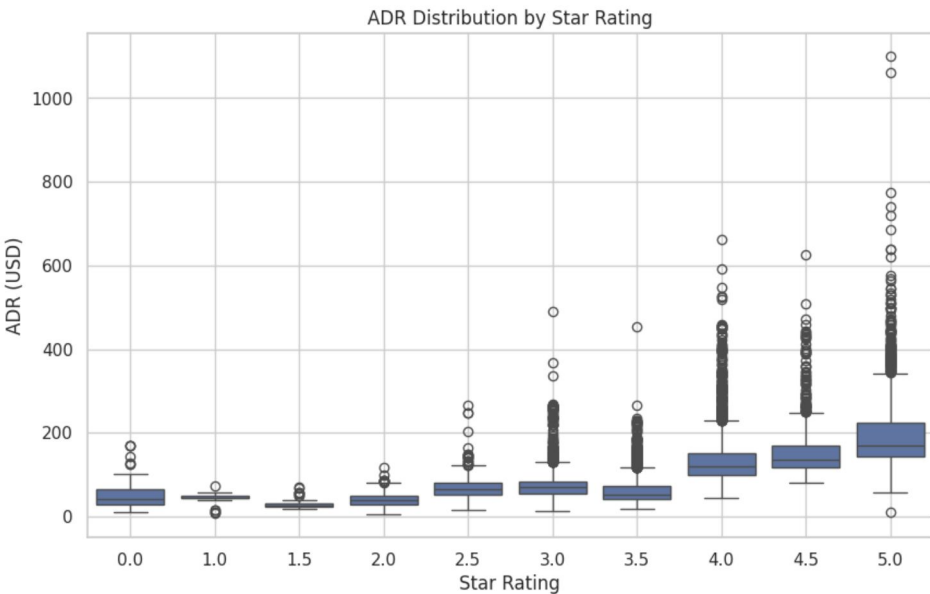
Future Considerations and Enhancements

- **Dynamic Pricing Implementation:** Adopt dynamic pricing models to better track and react to demand fluctuations and seasonal trends, ensuring the right message is aligned with actual price movements.
- **Monitor Seasonality Impact:** Gather data from multiple years to validate if observed trends are due to seasonality or one-off events.
- **Room Availability Data:** Incorporate room availability into the analysis to determine if limited supply affects price increases or justifies urgency messages.
- **Promotional Impact Analysis**
- **Improve Revenue Forecasting:**
- **Expand Data Scope:** Include more data, such as promotions, occupancy rates, and customer behavior, to better understand the drivers behind price changes.

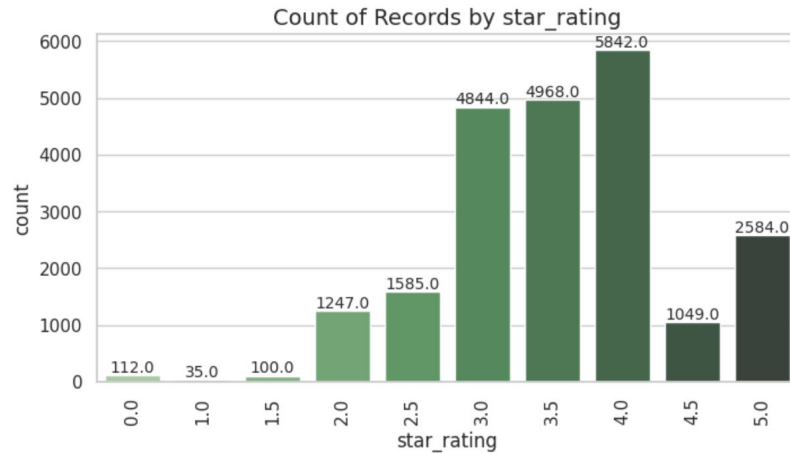
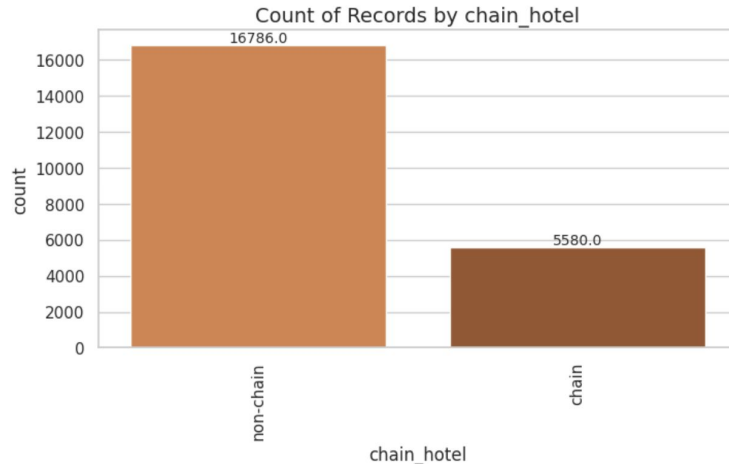
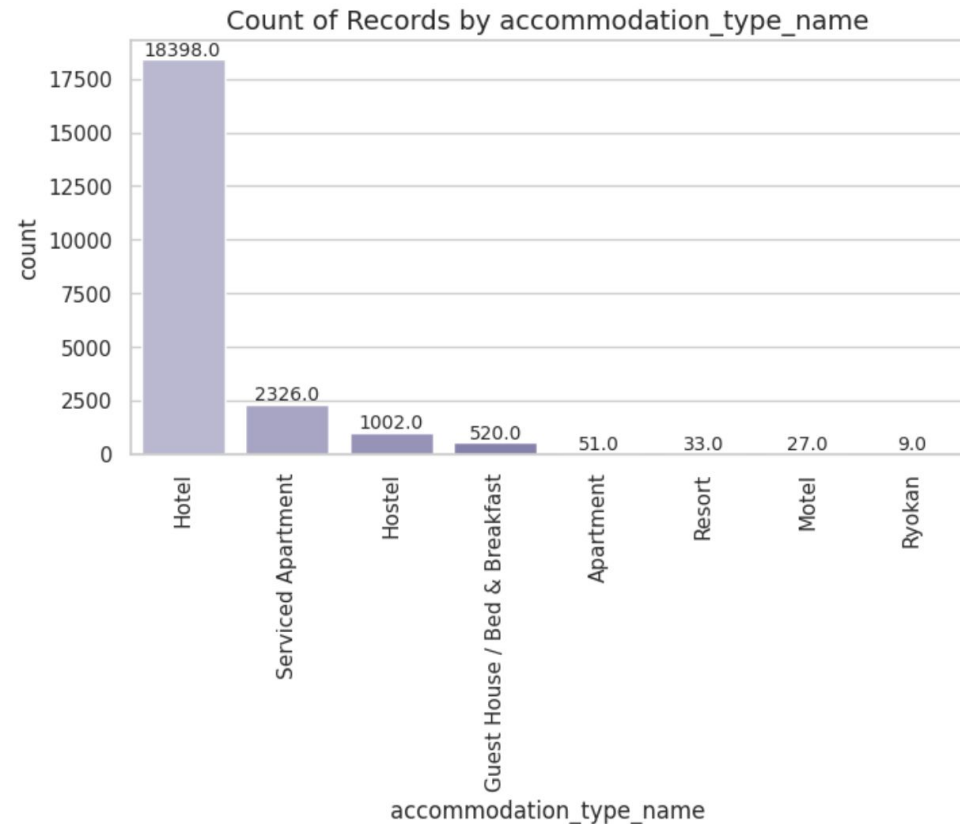
Users generally book 10 days in advance



Chain hotel ADR are higher than non chain.
ADR increases as the Star Rating of the Hotel increases.

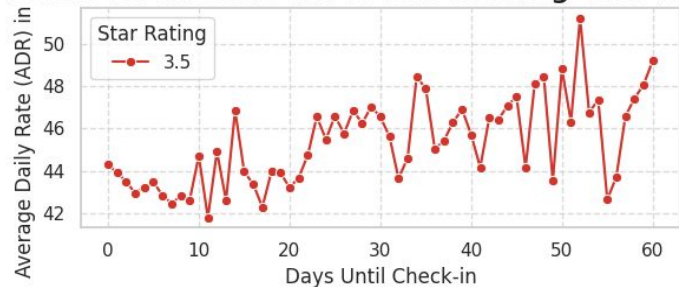


Distribution of bookings wrt to hotel , accom type and star rating

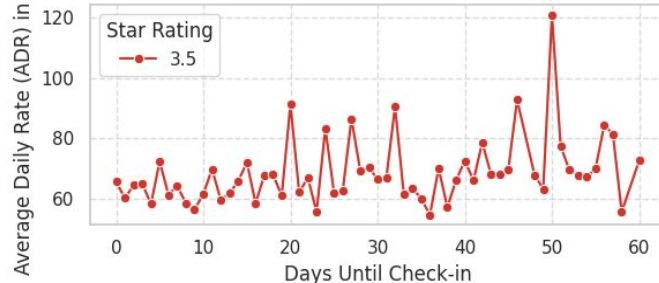


City A Trend: No Drop in Price as Checkin Date Approaches for top hotels with most bks.

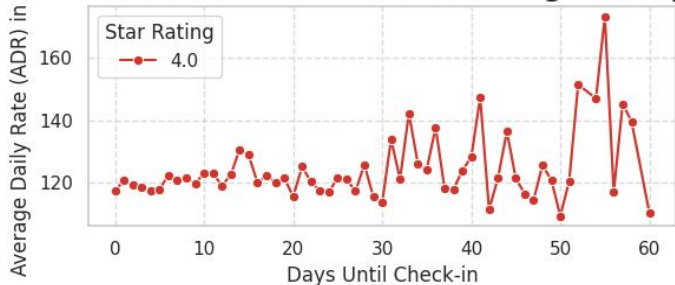
ADR Trends for Hotel ID 197996 as Booking Date Approaches



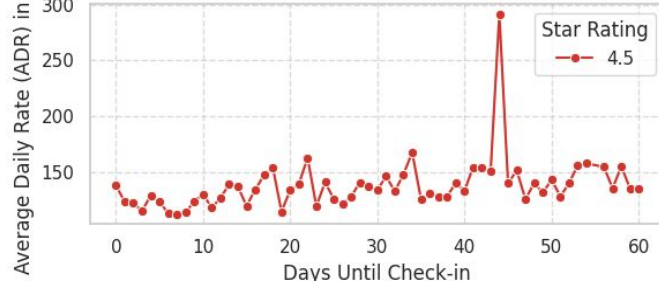
ADR Trends for Hotel ID 866630 as Booking Date Approaches



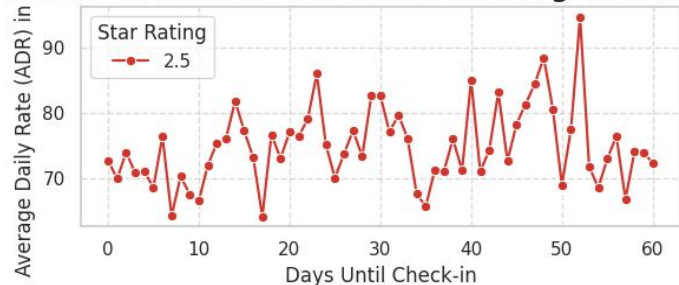
ADR Trends for Hotel ID 21272 as Booking Date Approaches



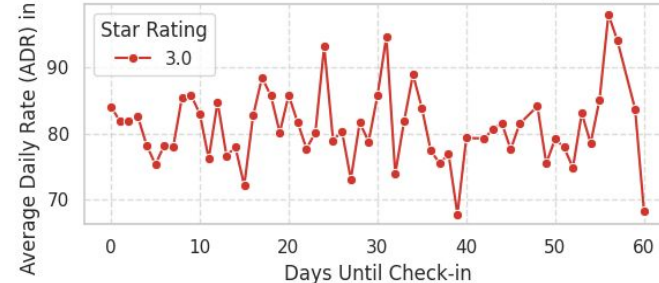
ADR Trends for Hotel ID 373272 as Booking Date Approaches



ADR Trends for Hotel ID 297388 as Booking Date Approaches



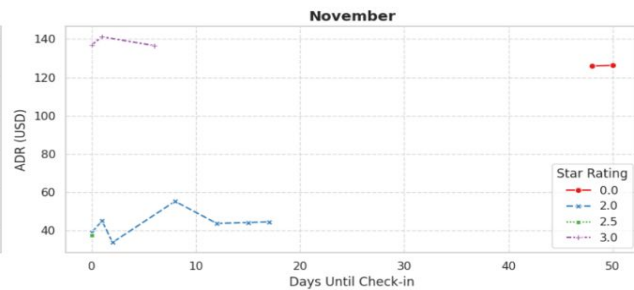
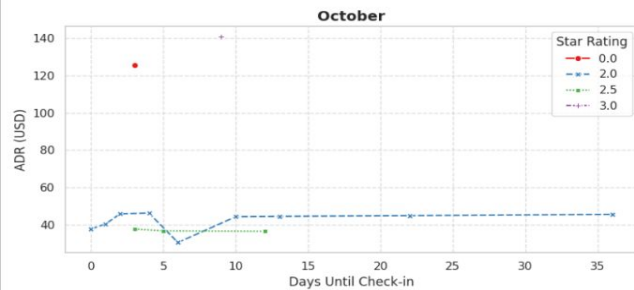
ADR Trends for Hotel ID 782884 as Booking Date Approaches



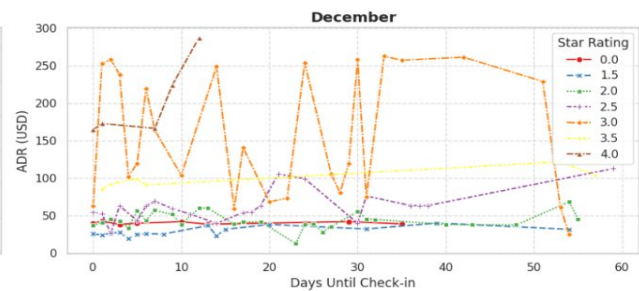
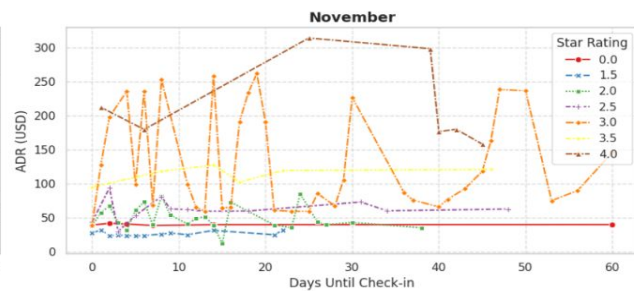
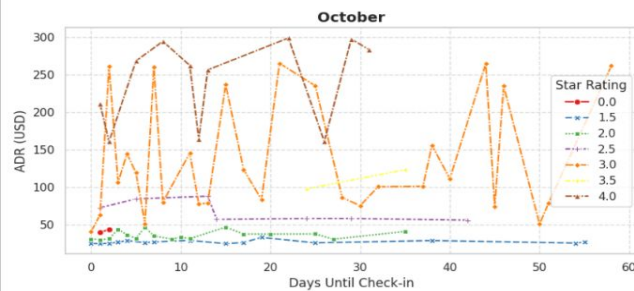
Rest Slides are about Trend observed across Accom Type and Checkin Month to Rule out Seasonality effects starting with City A.

Key Findings summarized in Slide 4 and 5.

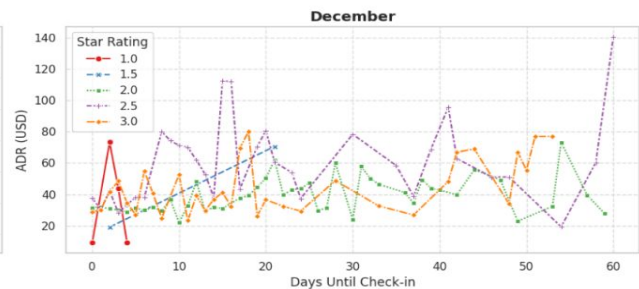
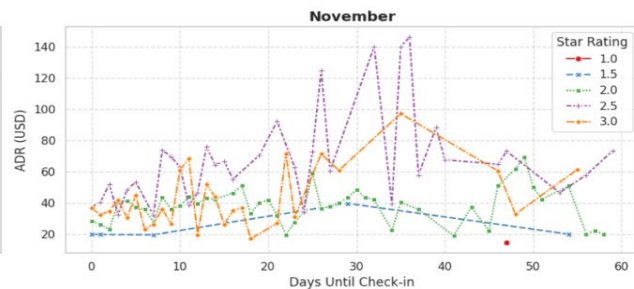
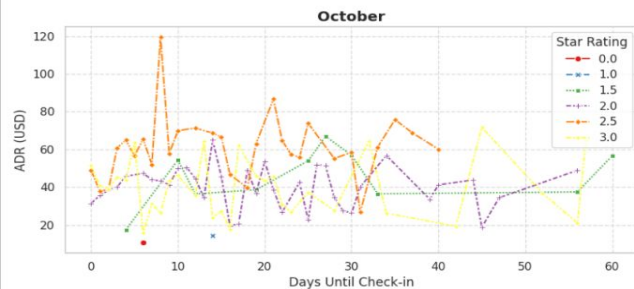
ADR Trends for Apartment by Check-in Month



ADR Trends for Guest House / Bed & Breakfast by Check-in Month

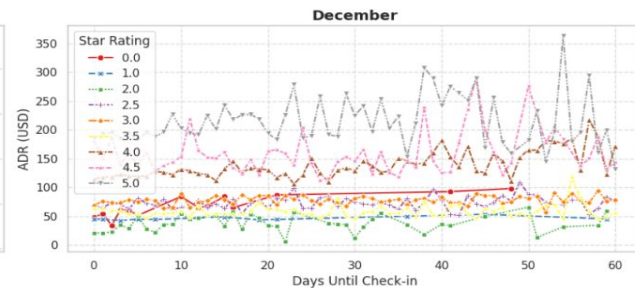
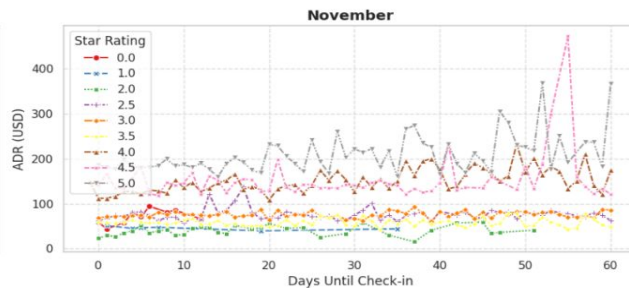
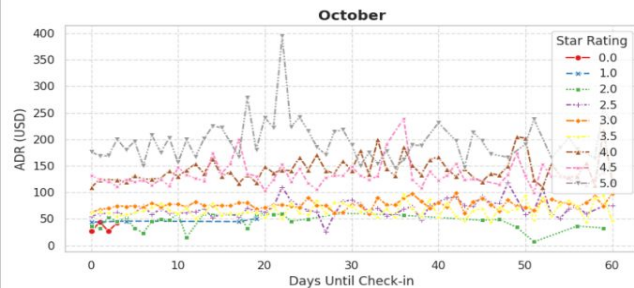


ADR Trends for Hostel by Check-in Month

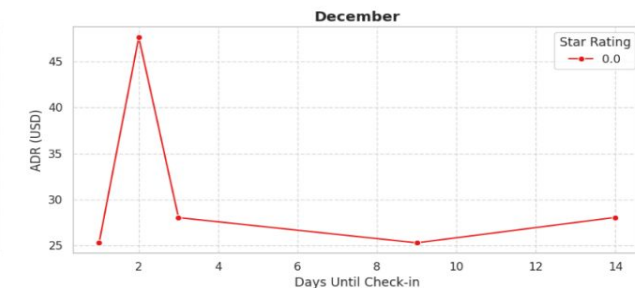
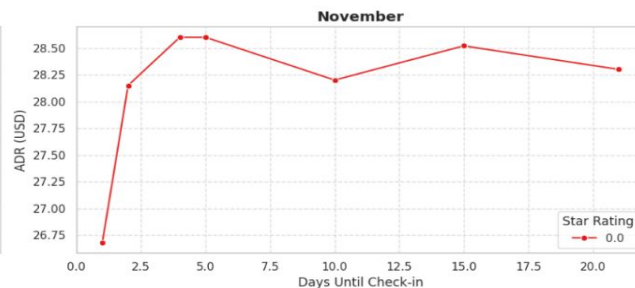
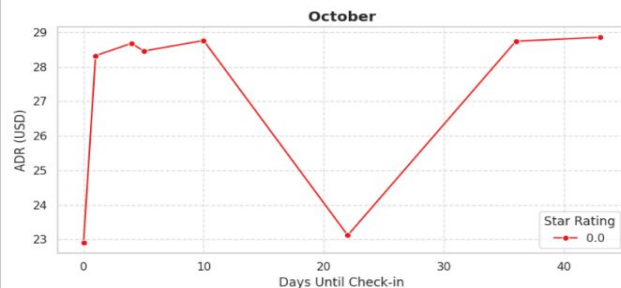


ADR Trends for Hotel by Check-in Month

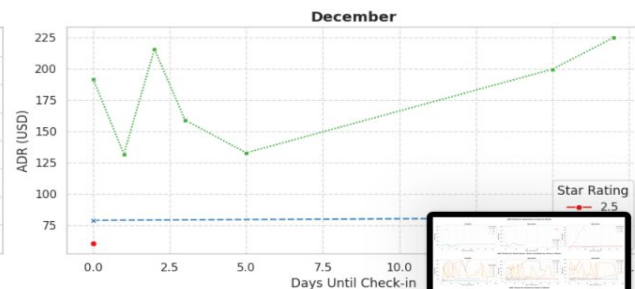
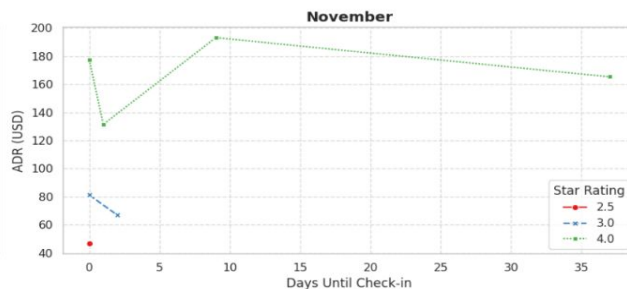
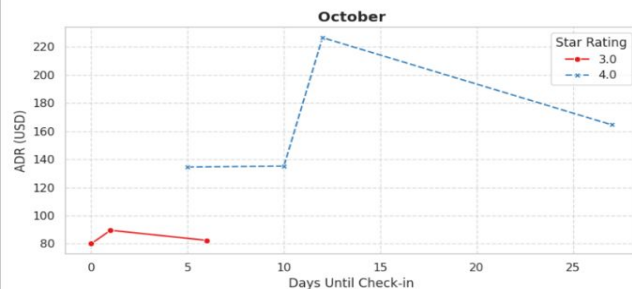
ADR Trends for Hotel by Check-in Month



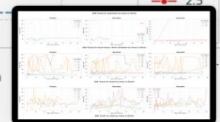
ADR Trends for Motel by Check-in Month



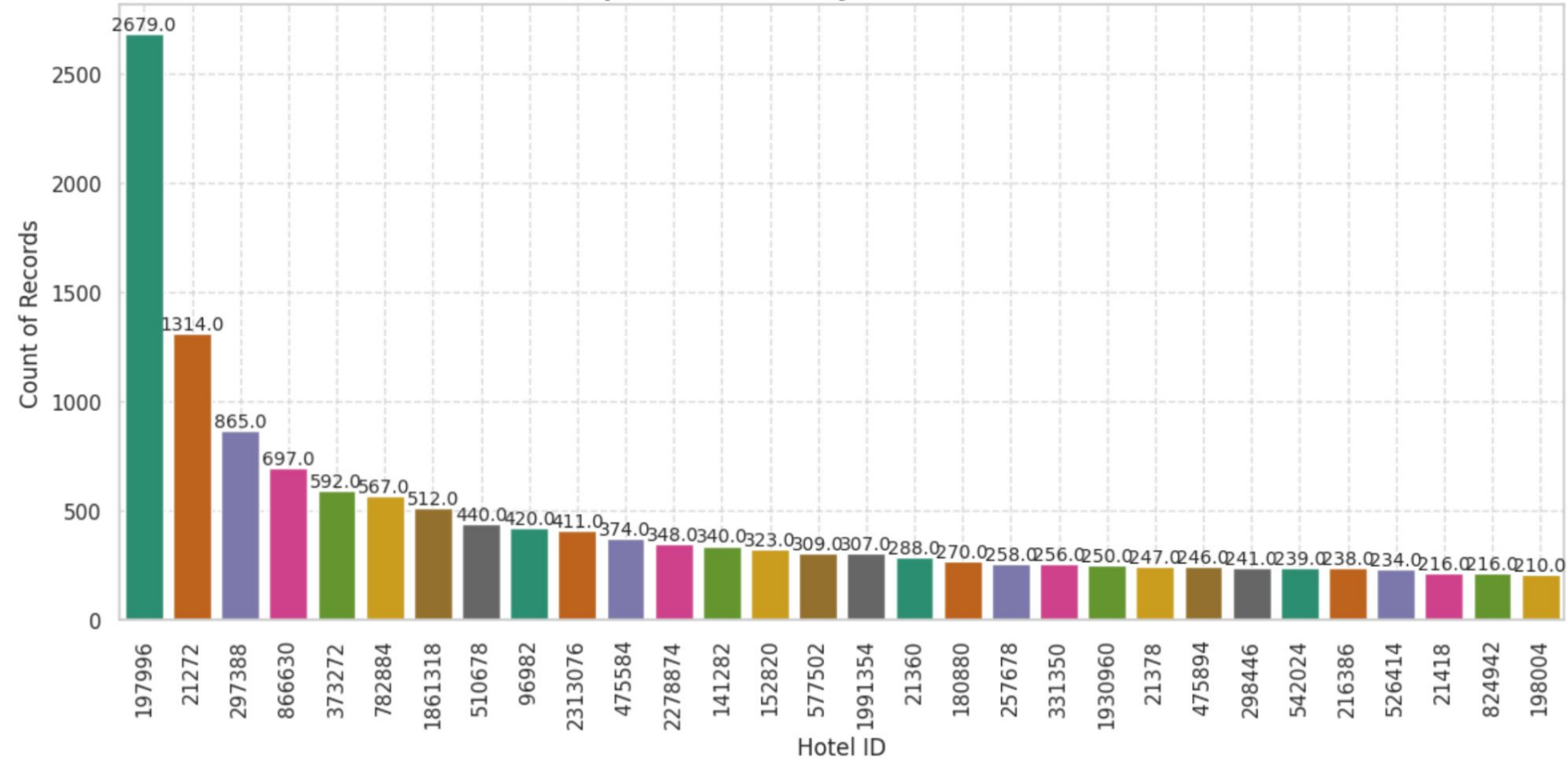
ADR Trends for Resort by Check-in Month



ADR Trends for Ryokan by Check-in Month

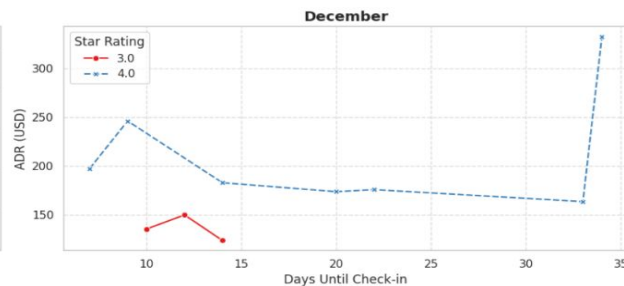
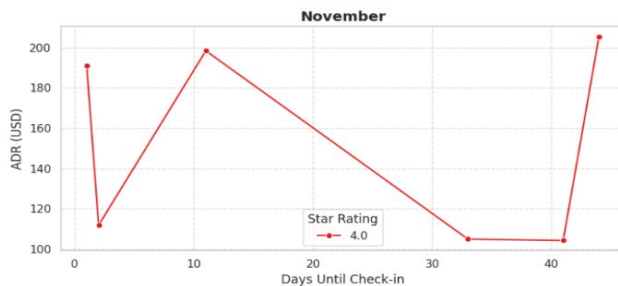
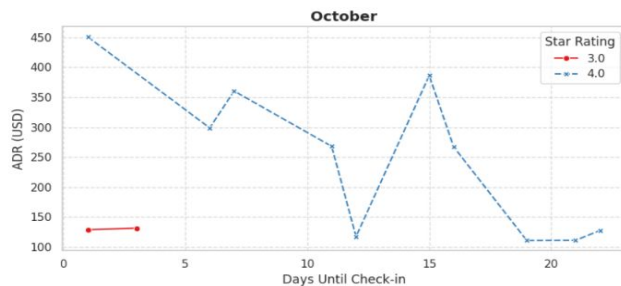


Top 30 Hotel IDs by Count of Records

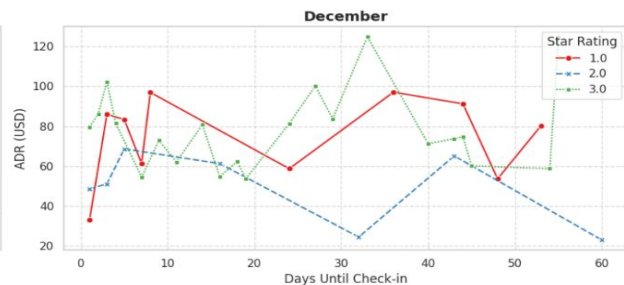
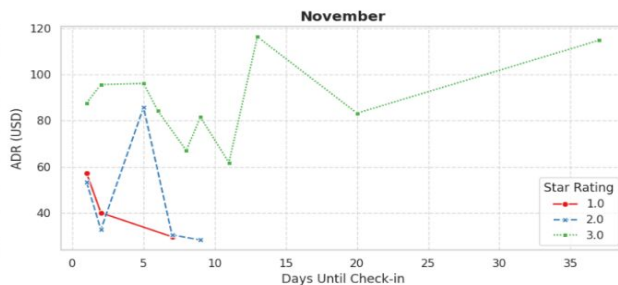
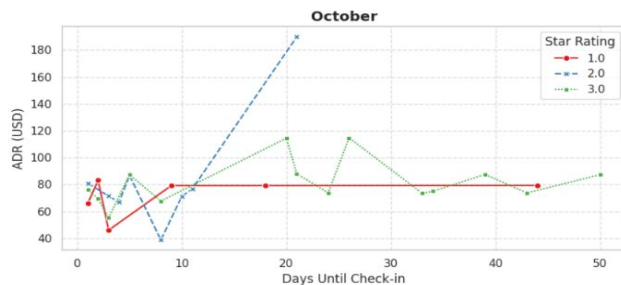


City B

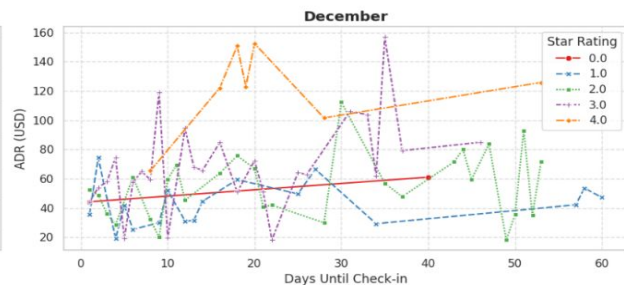
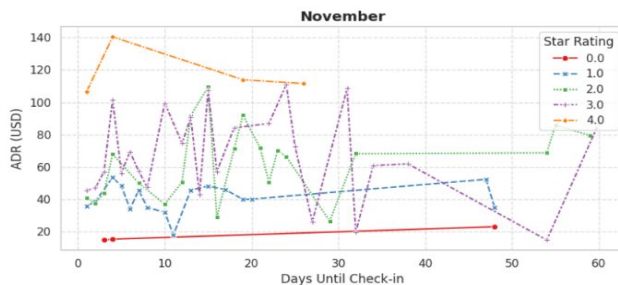
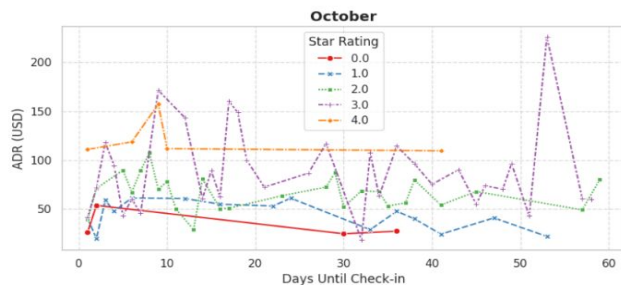
ADR Trends for Apartment by Check-in Month



ADR Trends for Bungalow by Check-in Month



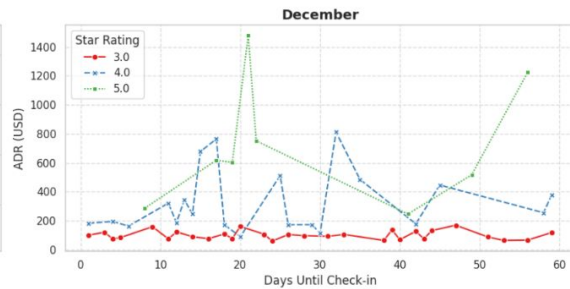
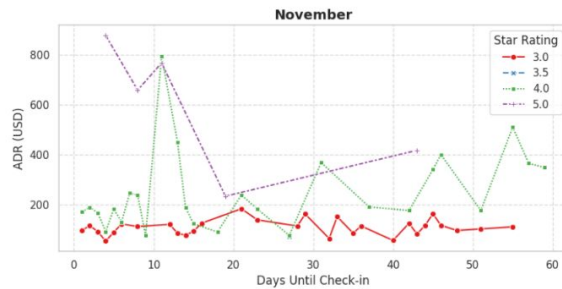
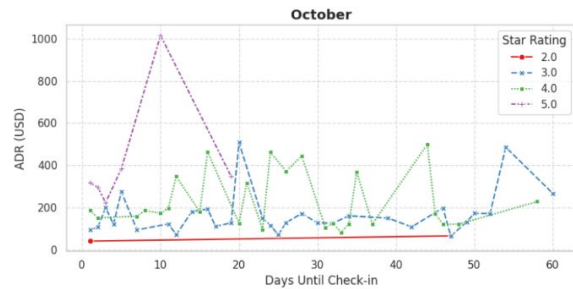
ADR Trends for Guest House / Bed & Breakfast by Check-in Month



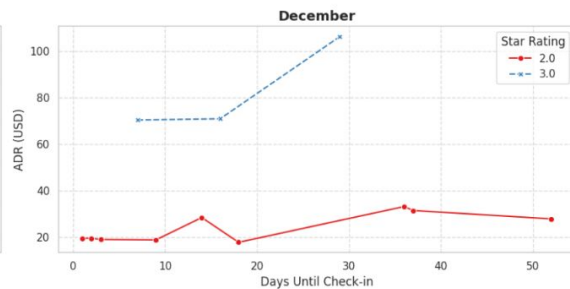
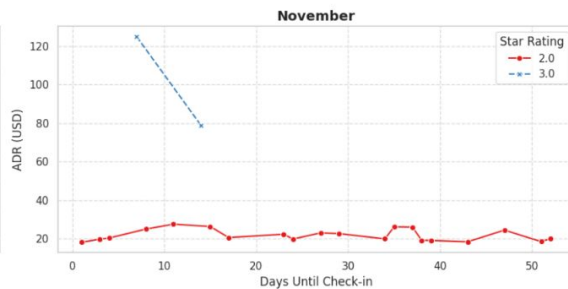
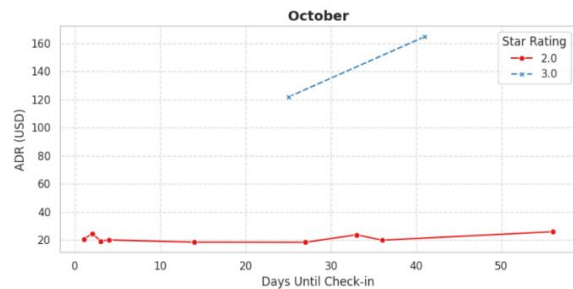
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ADR Trends for Holiday Park / Caravan Park by Check-in Month

ADR Trends for Resort Villa by Check-in Month



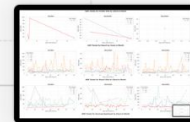
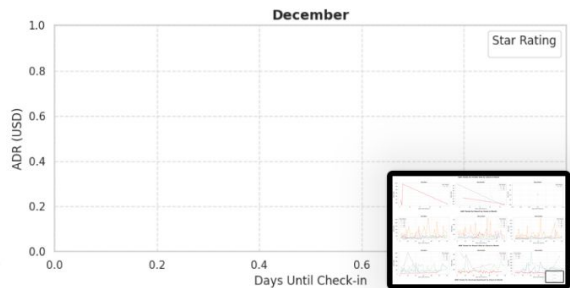
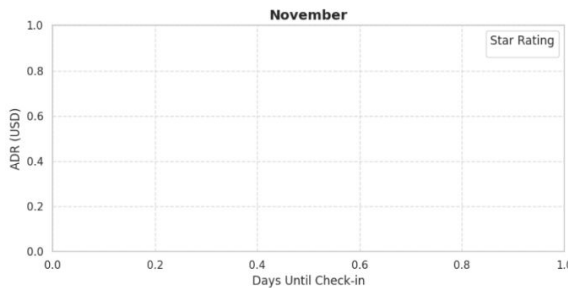
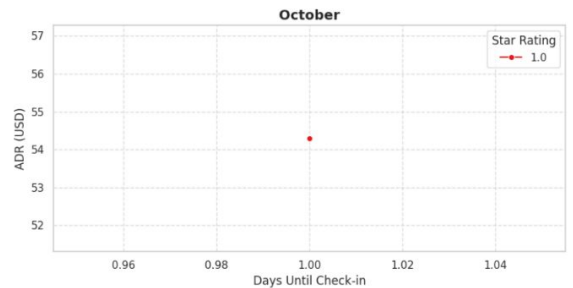
ADR Trends for Serviced Apartment by Check-in Month



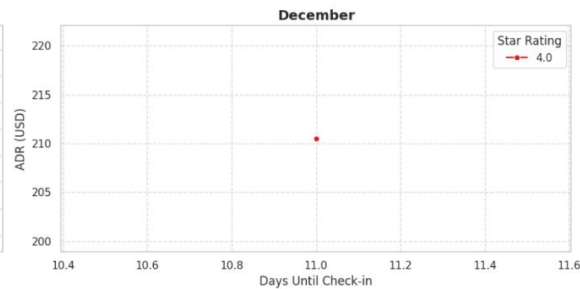
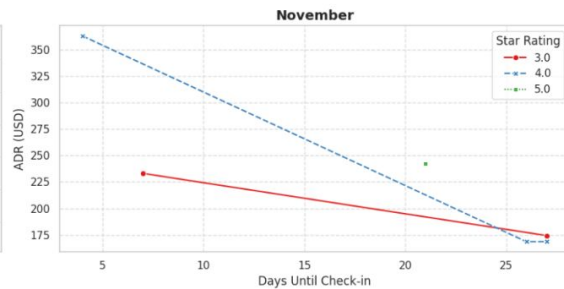
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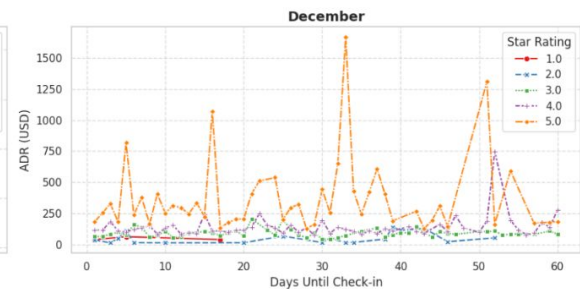
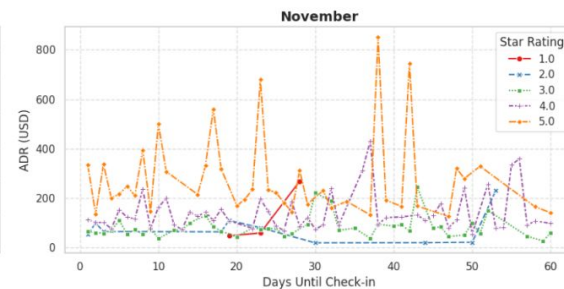
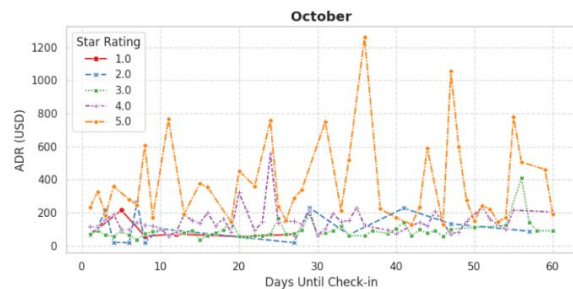
ADR Trends for Villa by Check-in Month



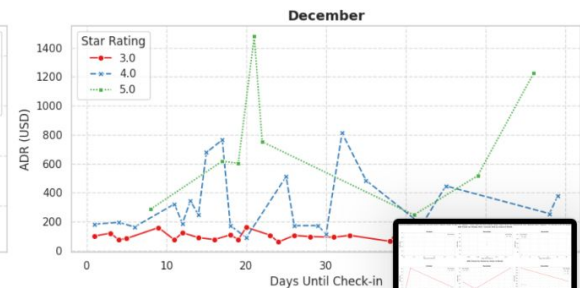
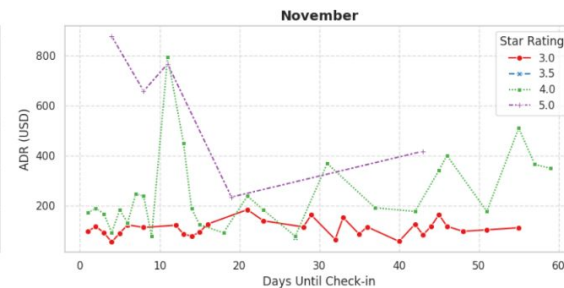
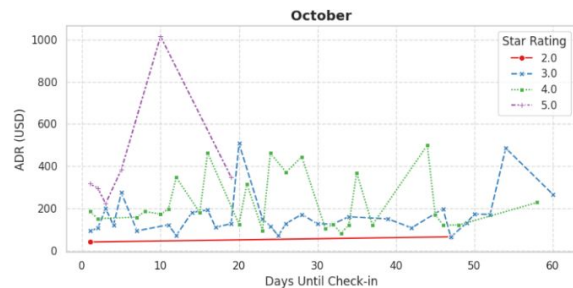
ADR Trends for Private Villa by Check-in Month



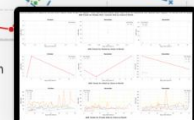
ADR Trends for Resort by Check-in Month

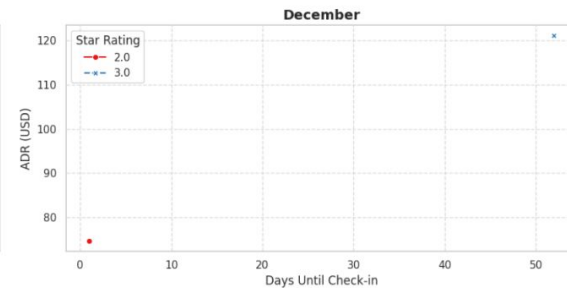
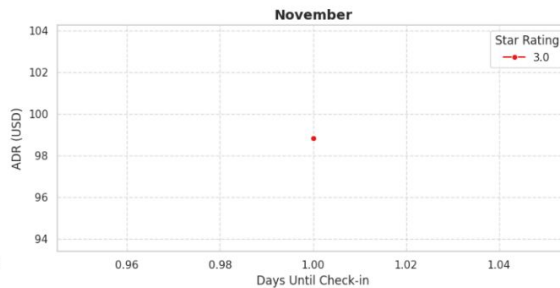
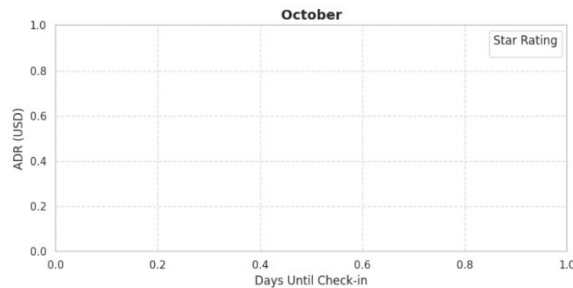


ADR Trends for Resort Villa by Check-in Month

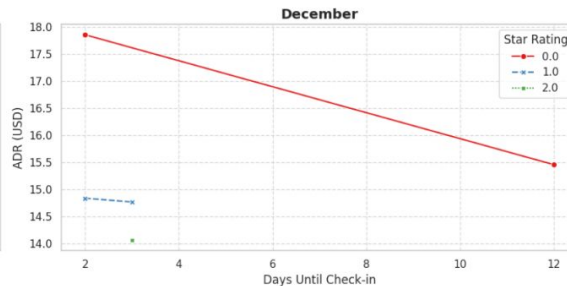
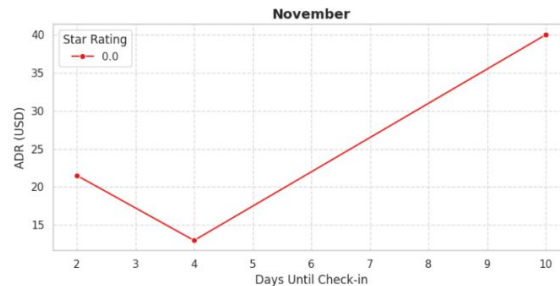
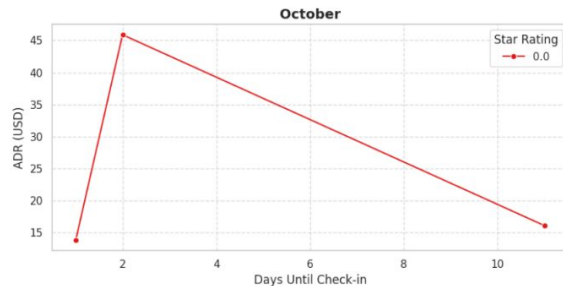


ADR Trends for Serviced Apartment by Check-in Month

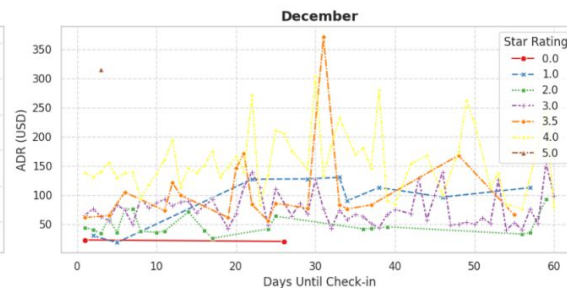
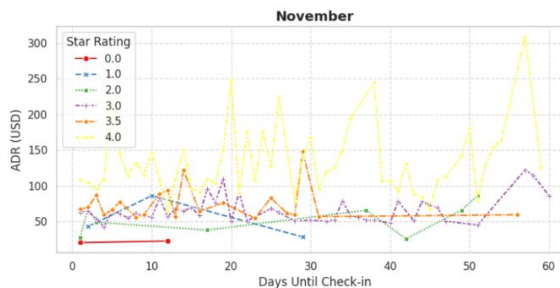
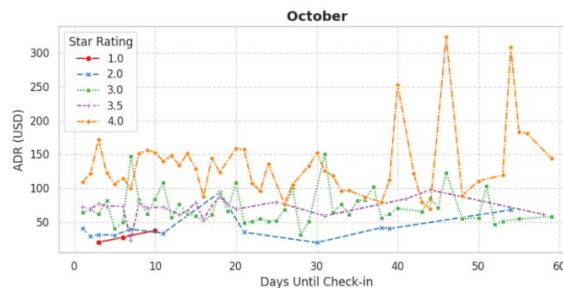




ADR Trends for Hostel by Check-in Month



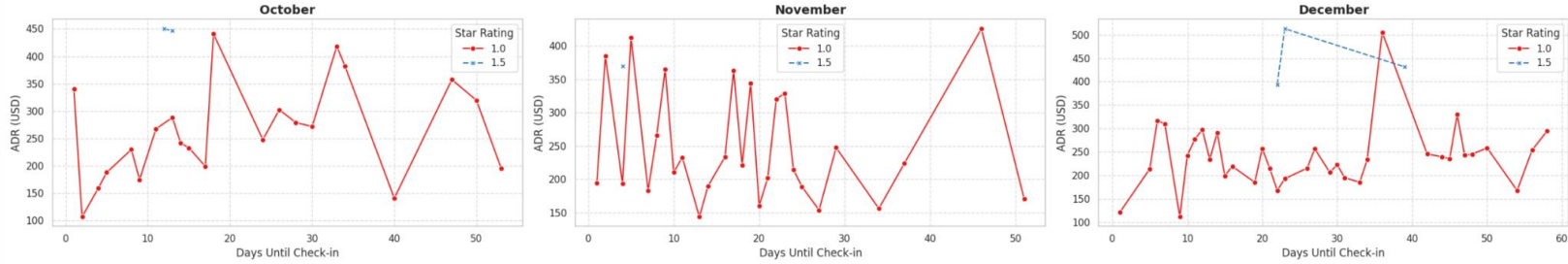
ADR Trends for Hotel by Check-in Month



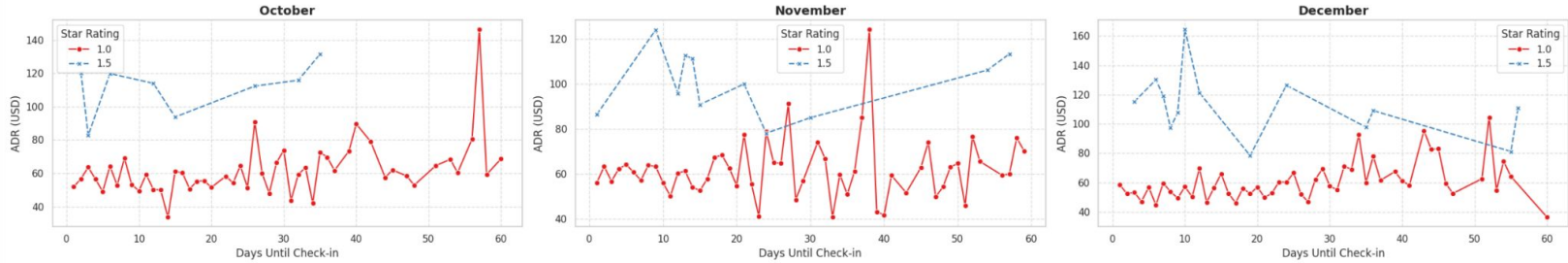
ADR Trends for Private Villa by Check-in Month

City C

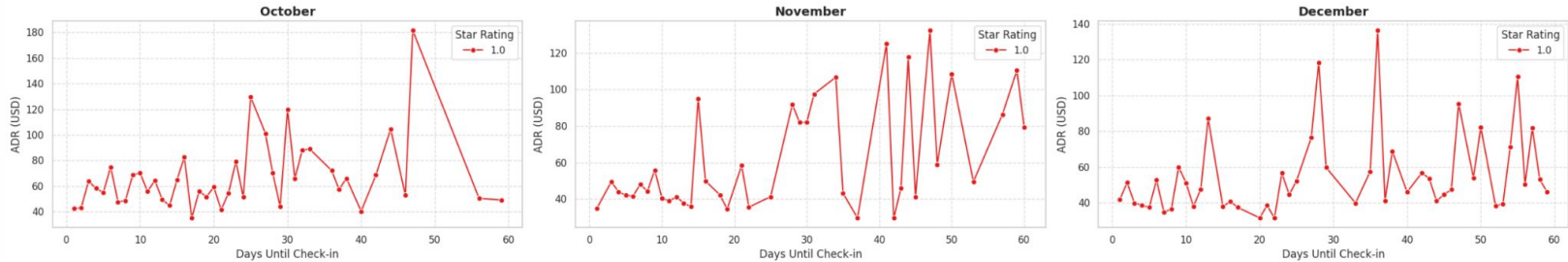
ADR Trends for Apartment by Check-in Month



ADR Trends for Capsule Hotel by Check-in Month

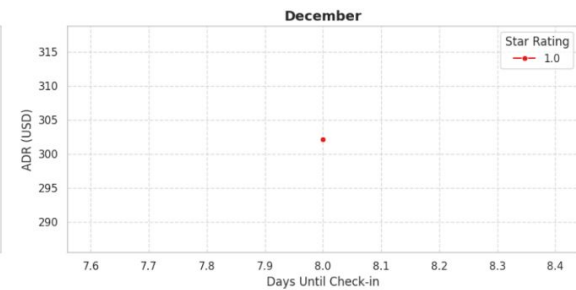
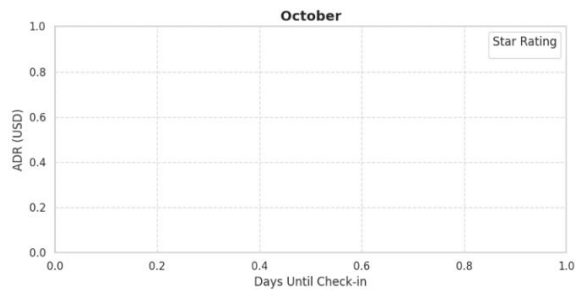


ADR Trends for Guest House / Bed & Breakfast by Check-in Month

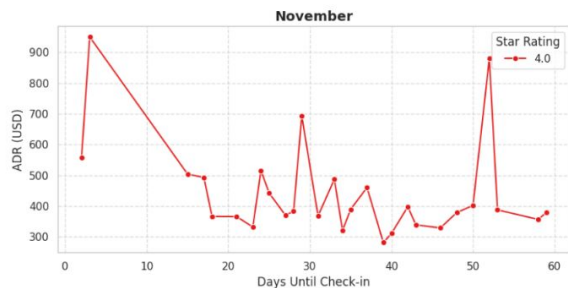
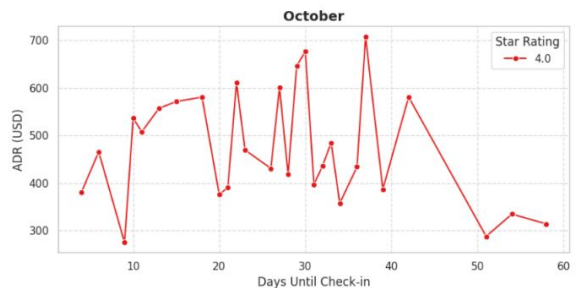


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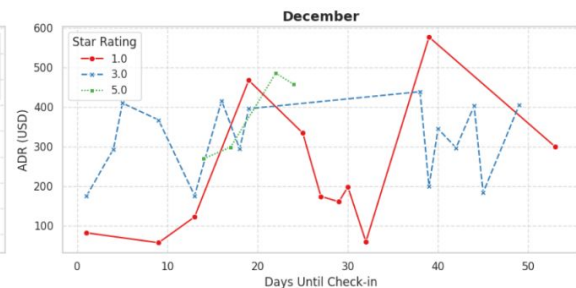
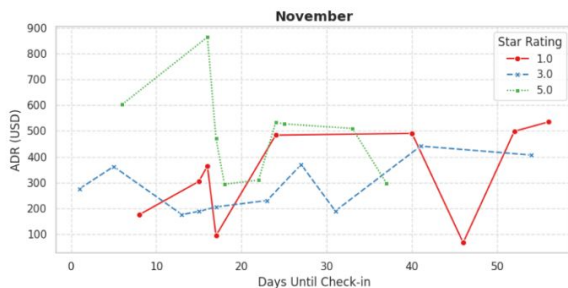
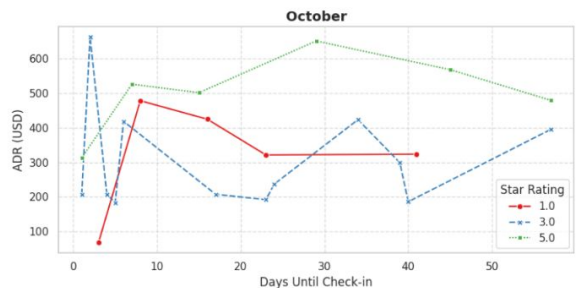
ADR Trends for Love Hotel by Check-in Month



ADR Trends for Resort by Check-in Month



ADR Trends for Ryokan by Check-in Month



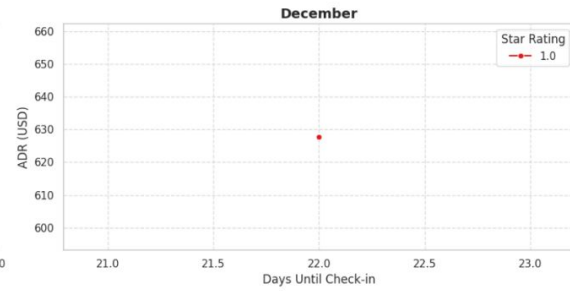
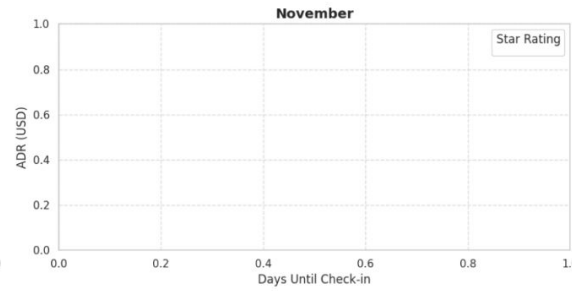
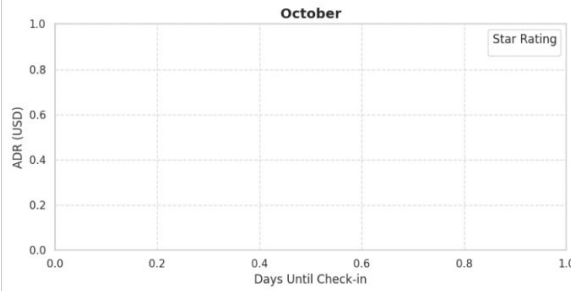
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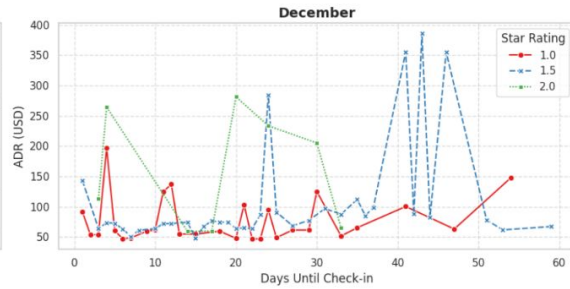
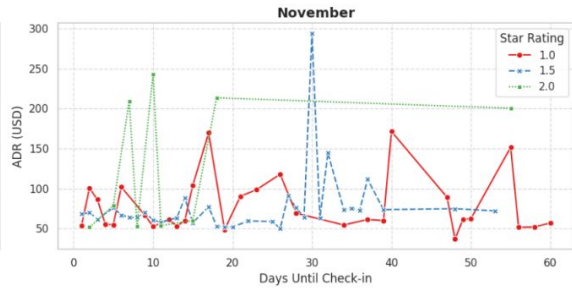
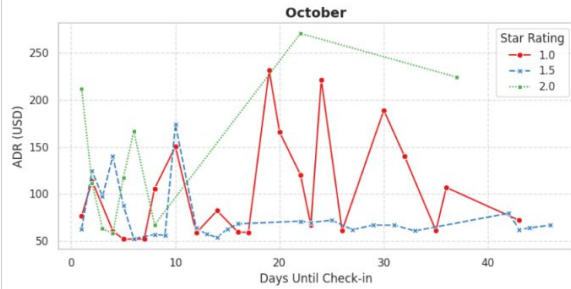
ADR Trends for Serviced Apartment by Check-in Month

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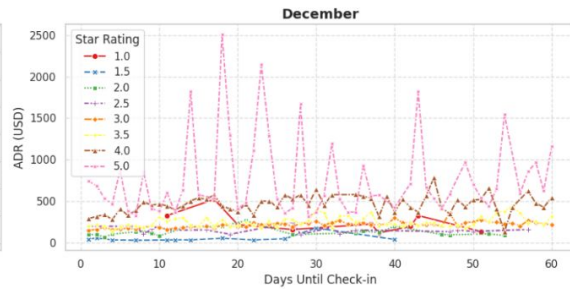
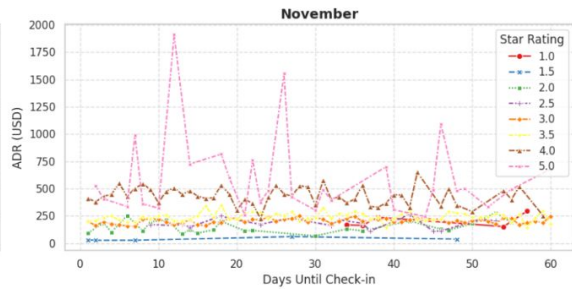
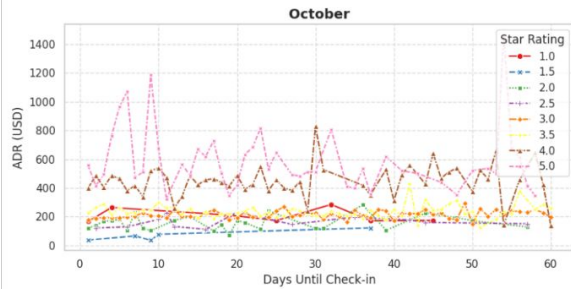
ADR Trends for Home by Check-in Month



ADR Trends for Hostel by Check-in Month



ADR Trends for Hotel by Check-in Month

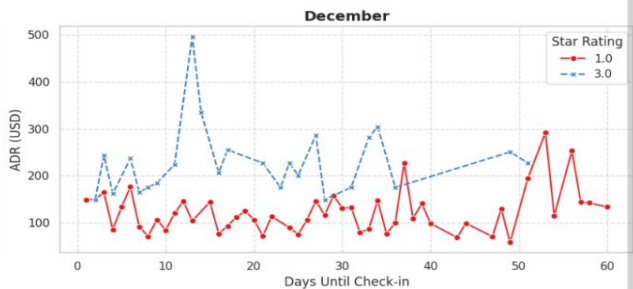
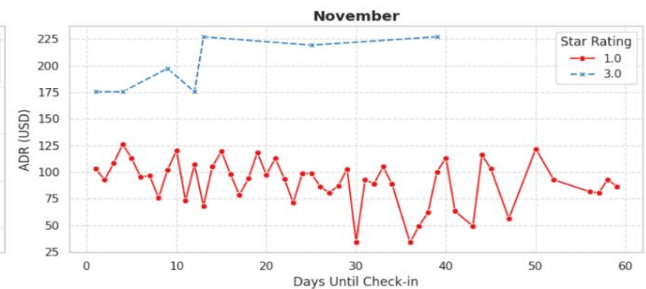
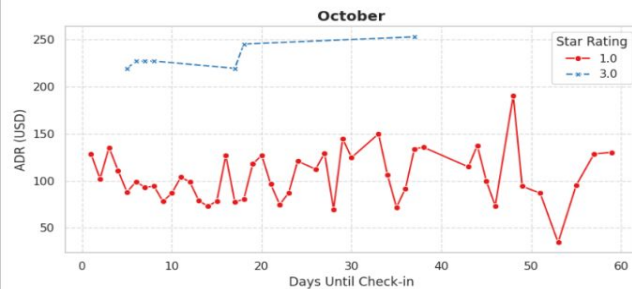


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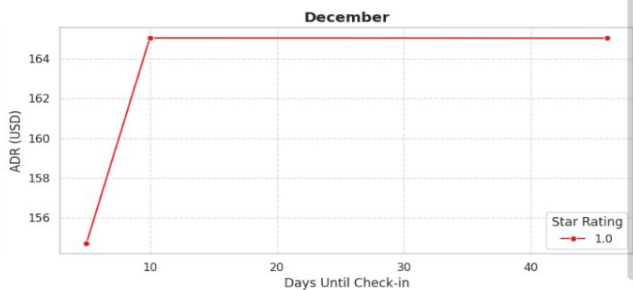
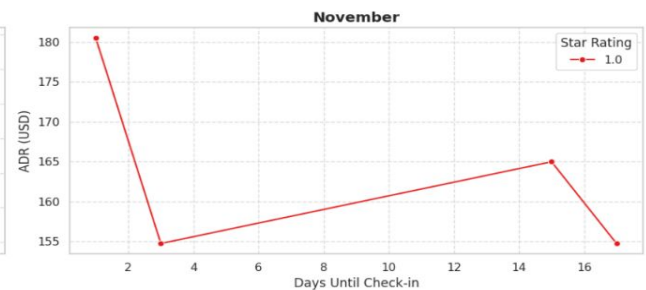
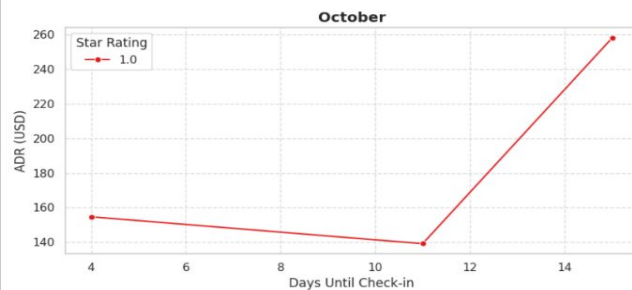
ADR Trends for Love Hotel by Check-in Month

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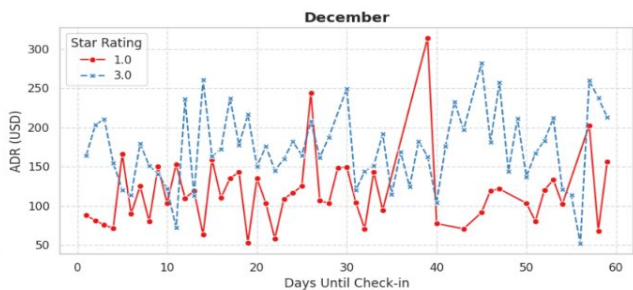
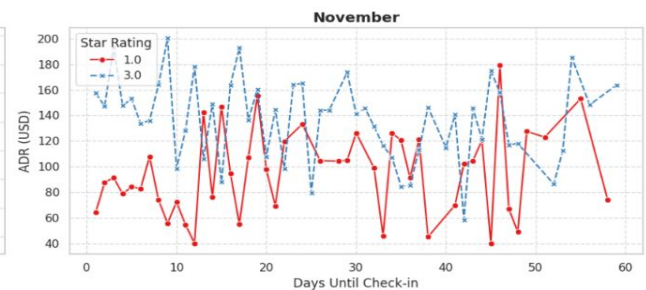
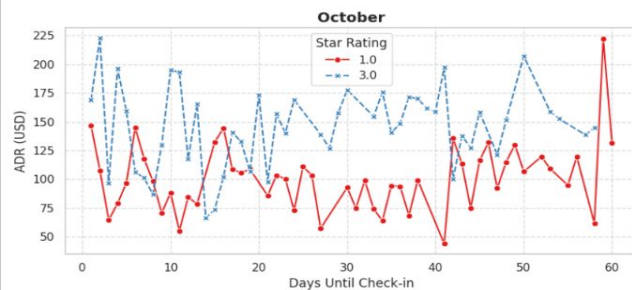
ADR Trends for Guest House / Bed & Breakfast by Check-in Month



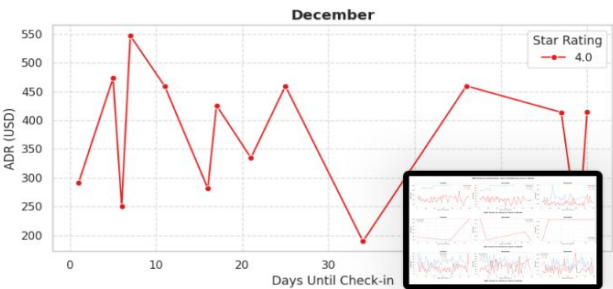
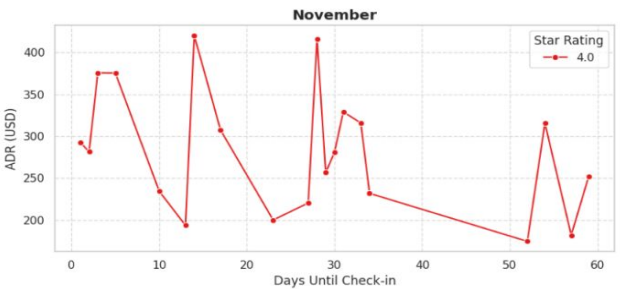
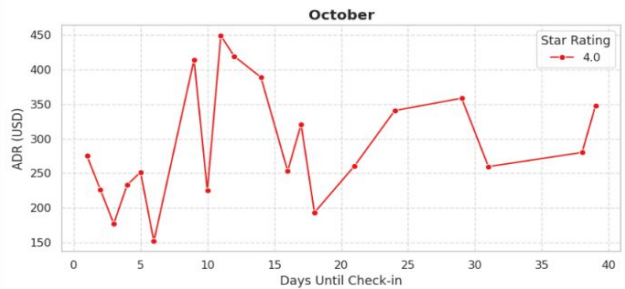
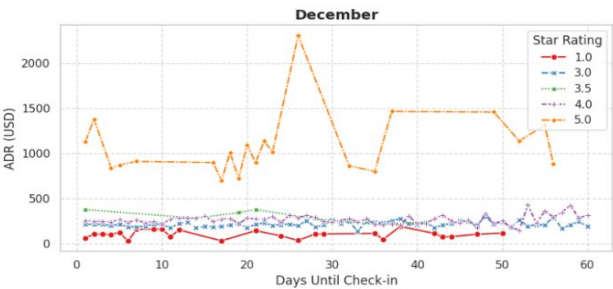
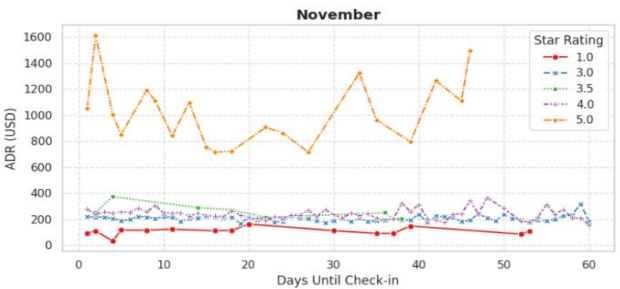
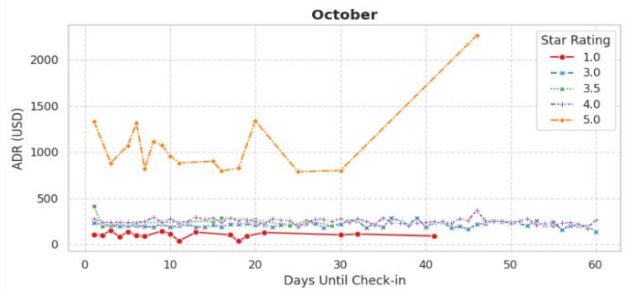
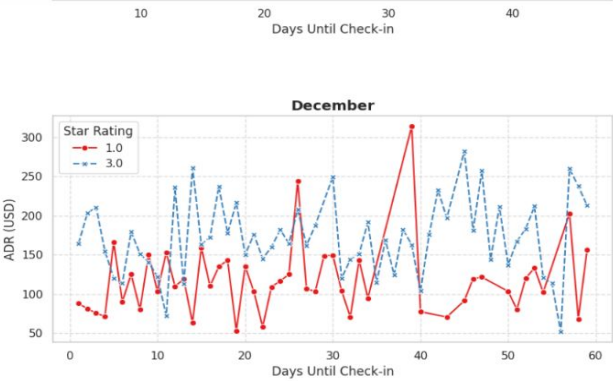
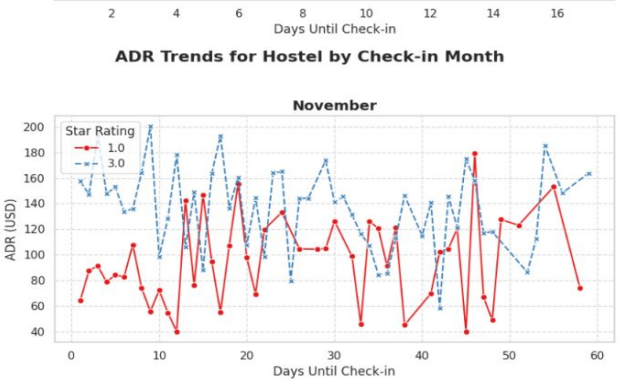
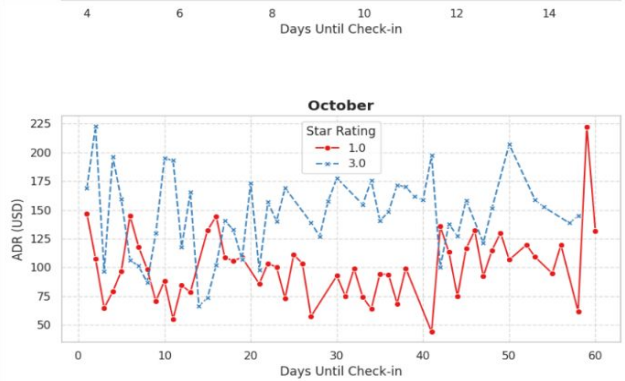
ADR Trends for Home by Check-in Month



ADR Trends for Hostel by Check-in Month



ADR Trends for Hotel by Check-in Month



Questions