Verifast Product Analyst Assignment

-Prakhar Singh

Information asked

1. Look at the data to see how Verifast is adding value to the website.

a. Customers who interact with chatbots are more likely to make purchases - The conversion rate is x6 of non-chatbot users as shown in Figure 1

b. Less Abandoned carts among customers who interacted with the chatbot - as shown in Figure 2

c. Abandonment Rate(Figure 3)- shows poor conversion rate with Abandonment Rate: 57.62% shows potential to use AI sales agent to drive engagement and sales further

d. Chatbot engagement is abysmally low with 3% total engagement - shows the potential to test proactive chatbot rather than reactive one(Figure 4)

e. There is a significant drop-off after the product viewing stage, with only 580 customers adding items to their cart and 453 proceeding to checkout. Figure 5
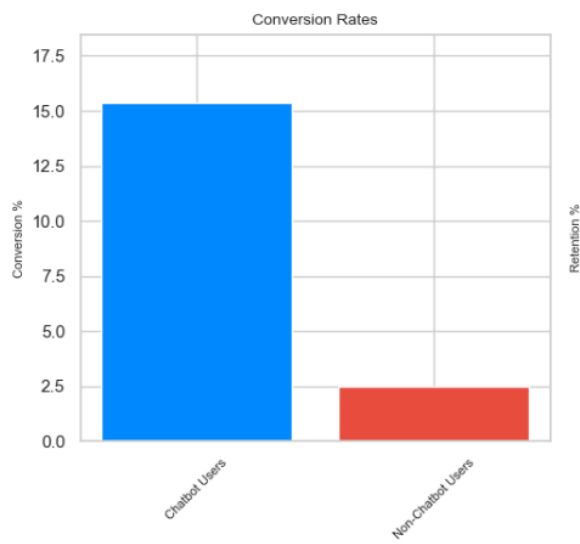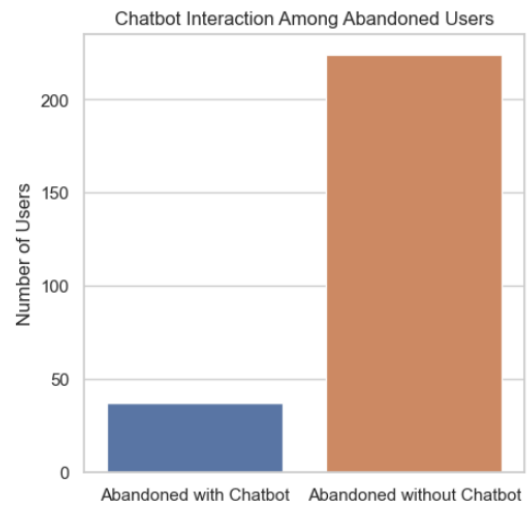
Figure 1

Figure 2

Chatbot Engagement Analysis:
Total Users: 7308.00
Chatbot Users: 221.00
Chatbot Engagement %: 3.02
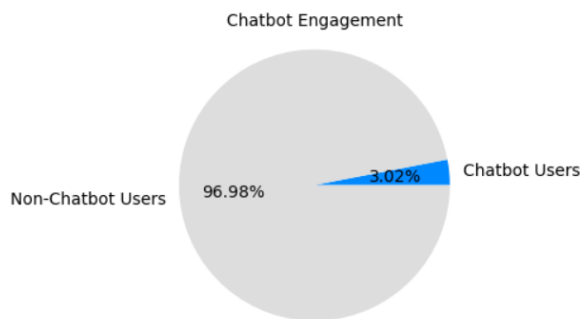

Key Metrics:

Figure 4

Key Metrics:
* Total users who started checkout: 453
* Users who abandoned checkout: 261
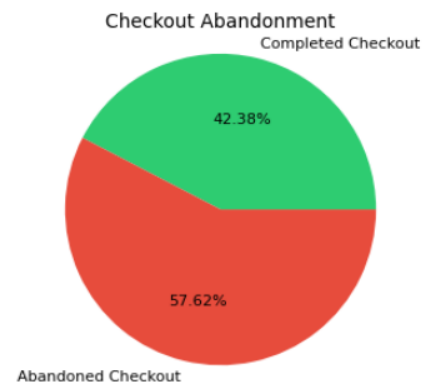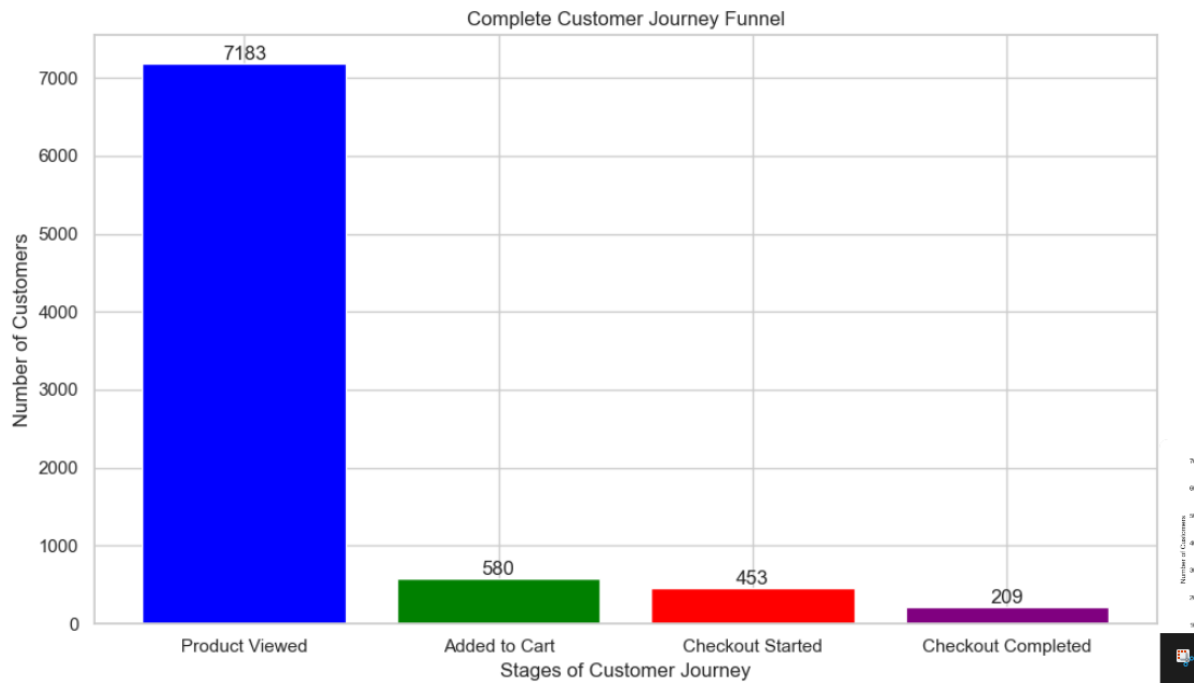* Abandonment Rate: 57.62%

Figure 3

Figure 5

2. Find out cohort of customers and how they interact with Verifast. Example- *Cohorts can be like- People coming from one particular utm_source, or people who came some other day as well or people who added a product to cart and then removed it.*

a. **Cohort 1 :** Chatbot Engaged user - The data reveals that 81.7% of users engage minimally with the AI, suggesting the chatbot effectively resolves simple queries swiftly. However, the low(81.46%) medium (11.7%) and high (6.8%) engagement levels indicate opportunities to enhance interactions, possibly improving user retention and satisfaction by encouraging deeper engagement.
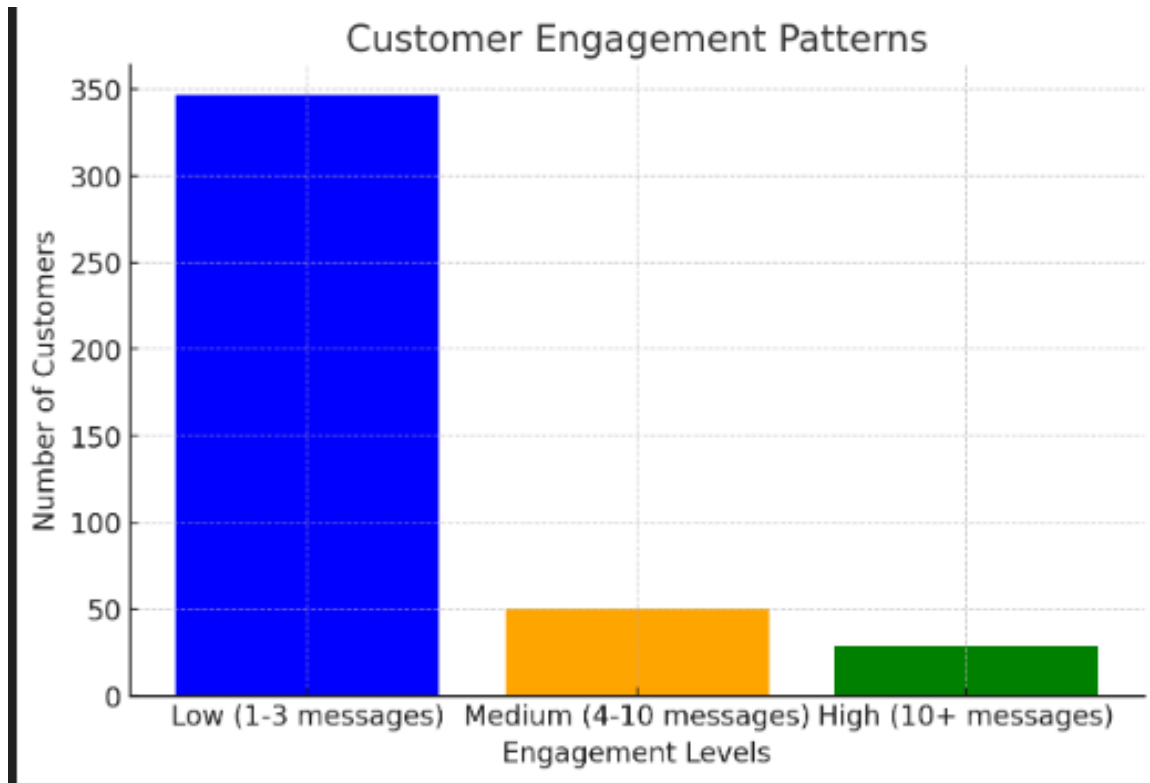
AI Agent Interaction Summary:
Total unique customers interacting with AI: 426

Customer Engagement Patterns:

Low Engagement (1-3 messages): 347
Medium Engagement (4-10 messages): 50
High Engagement (10+ messages): 29

b. **Cohort 2:** Day of Week / Time of Day Cohorts:

weekday activity (blue bars) tends to spike around midday (roughly 12 PM–3 PM), whereas weekend activity (green bars) is more pronounced in the late evening (8 PM–10 PM).

- **Weekday Shoppers (Mon–Fri):**
  - **Peak Hours:** 12 PM–3 PM.
  - **Implication:** Many weekday users likely sneak in shopping or inquiries during lunch breaks or early afternoon.
  - **Action:**

- Schedule targeted promotions or reminders around lunch (e.g., 11 AM–1 PM) when people have time to engage.
- Keep chatbot responses quick and concise, catering to users who may be multi-tasking at work.

- **Weekend Shoppers (Sat–Sun):**
  - **Peak Hours:** 8 PM–10 PM.
  - **Implication:** Weekend users are more relaxed and browse during the evening, possibly after work-week errands.
  - **Action:**
    - Send push notifications or promotional emails in the late afternoon, so your brand is top-of-mind by evening.
    - Adjust chatbot prompts to be more conversational and patient, matching the "leisurely browsing" mindset.


Customer Interactions by Hour of Day
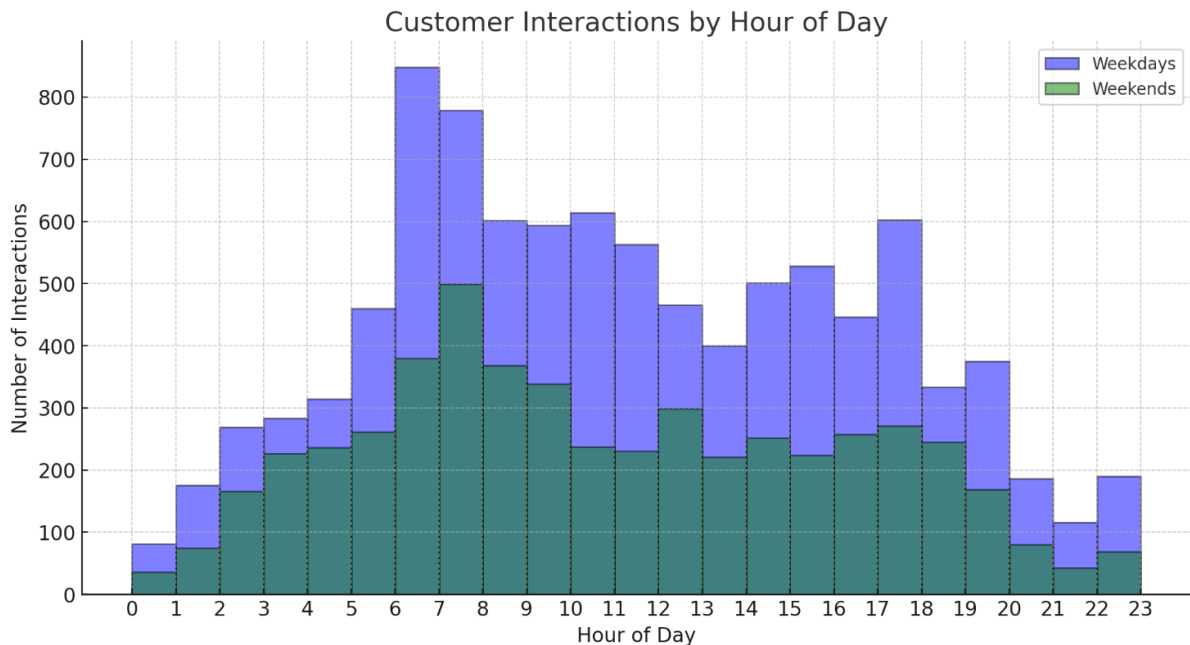
c. Cohort 3: UTM Source–Driven Cohorts

A drastically higher "Other" conversion rate underscores the need to refine UTM tagging and clarify direct traffic sources. Channels with 0% conversions

might be underperforming or under-measured.

- **"Other"** is capturing direct or untagged traffic, which may represent users already familiar with the brand.

- There may be **incomplete or inconsistent UTM tagging**, causing traffic that should be attributed to a specific source to fall into "Other."
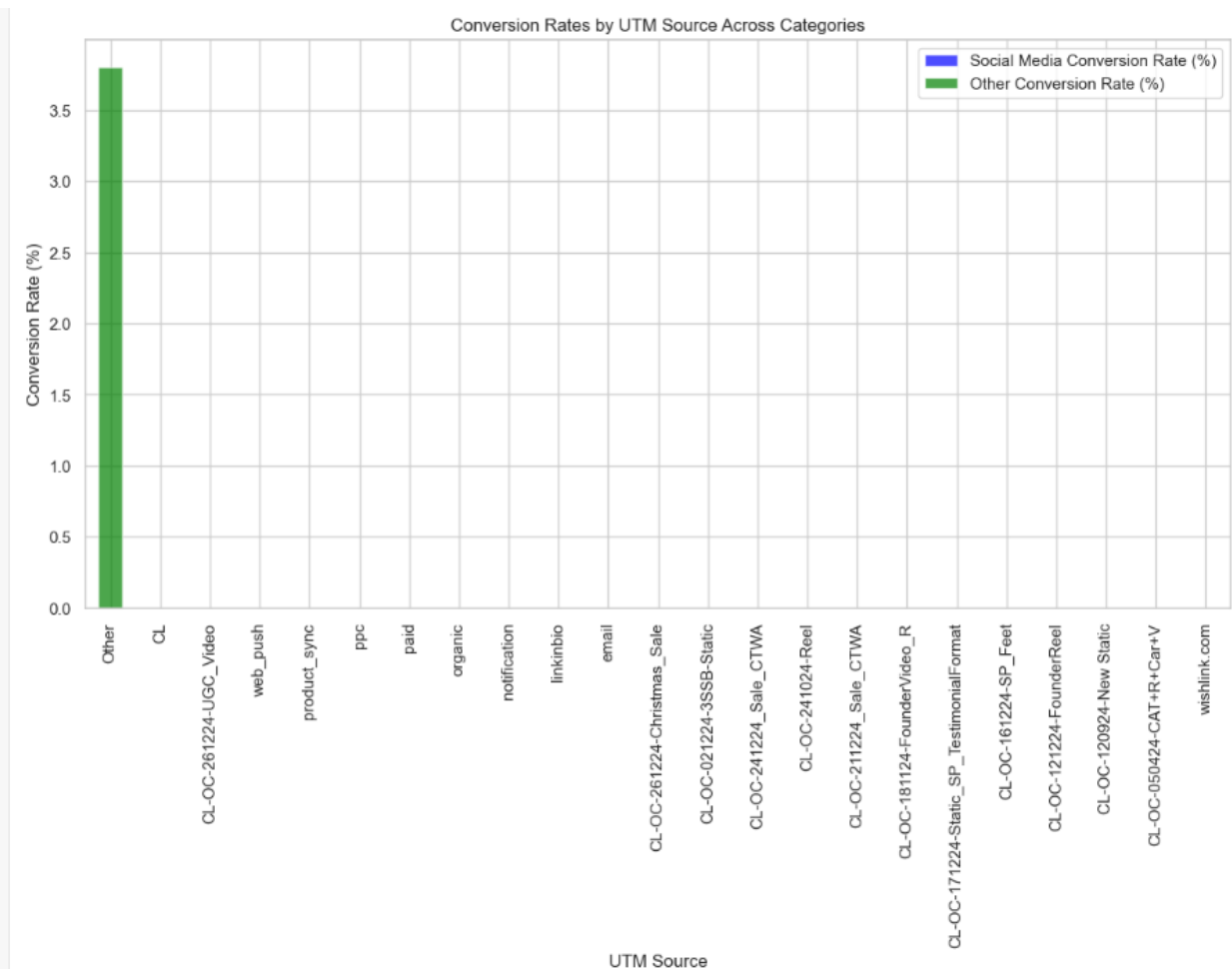

Cohort 3.1: Performance of the WhatsApp UTM medium. High Interest but Low Conversion:

- **Product Added to Cart**: There is a significant number of events where products are added to the cart (231 events), indicating initial interest or

intent to purchase among users coming from WhatsApp.

- **Checkout Initiation**: A much smaller number of these interactions proceed to the checkout initiation stage (20 events), suggesting a sharp drop-off during the transition from adding items to cart to starting the checkout process.

  - **Completion of Purchase**: No events recorded for checkout completion, highlighting a complete falloff at the final purchasing step.

Customer Funnel Performance for WhatsApp UTM Medium
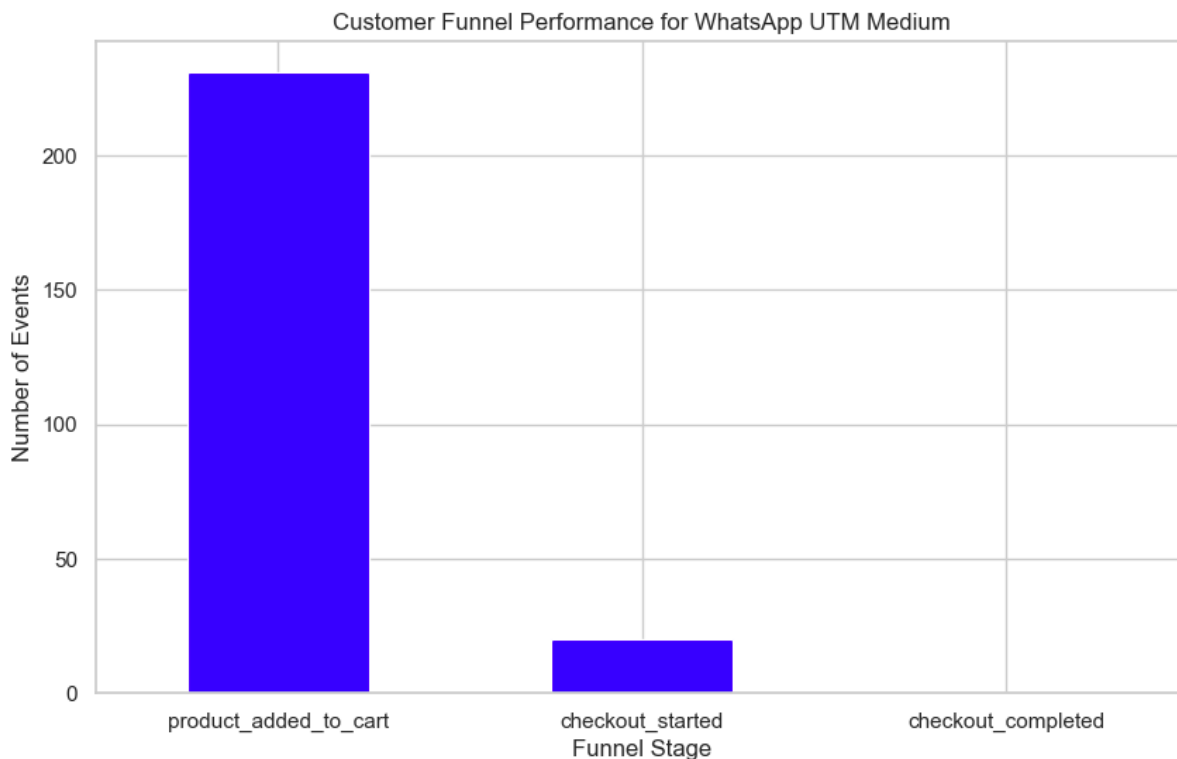
```
event
product_added_to_cart    231
checkout_started          20
checkout_completed         0
Name: count, dtype: int64
```

3. What sort of cohort can the AI try to engage proactively with to improve the conversion of the website. Eg- *So you can see if the*

probability of people placing an order is higher when they visit 2nd time and AI can try to talk to them.

1. Users Who Added Items to Cart but Did Not Checkout
   Cohort Description: Users who add products to the cart but leave without initiating checkout. Engagement Strategy:

   - Cart Reminder: Use AI to send gentle reminders about the items left in the cart. This could be done while they are still on the site or as a follow-up notification or email.
     Offer Assistance: Ask if they need help or have questions about the items in their cart, possibly addressing concerns related to payment, product details, or shipping

2. **High Engagement Users from Low Conversion Channels**

   Cohort Description: Users coming from channels with high engagement but low conversion rates, like the WhatsApp UTM medium.

   Engagement Strategy:

   - **Focused Interaction**: Since these users show interest but don't proceed to purchase, engage them with more personalized communication that might include product recommendations based on their activity or answers to common barriers to purchase.

   - **Feedback Collection**: Use AI to inquire why they didn't proceed with the purchase, providing insights directly from users that can be used to improve the conversion process.

3. **Weekday vs. Weekend Shoppers**

   Cohort Description: Distinct behaviors noted between users shopping during weekdays and weekends.

   Engagement Strategy:

   - **Weekday Engagement**: As these users may be shopping during breaks or in a hurry, keep interactions quick and to the point. Highlight time-limited offers or quick-checkout options.

- **Weekend Engagement**: With more leisurely browsing, use this opportunity for longer interactions, offering detailed information and comparisons, or engaging in more extensive conversations.

4. **Repeat Visitors**

   Cohort Description: Users who have visited the site more than once/repeat product views

   Engagement Strategy:

   - **Proactive Chat**: Initiate conversations with repeat visitors by recognizing their return through cookies or session IDs. The AI can greet them back with personalized messages like, "Welcome back! Can I help you find something specific today?"

   - Drive further engagement with users with more information on products eg reviews

   - **Special Offers**: Provide incentives such as special discounts or exclusive previews that are tailored based on their previous browsing or purchase history.

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4. Design an experiment for 3 and how will you measure the success or failure of it?

Experiment 1: AI Chatbot for Direct Checkout on WhatsApp

Objective

Increase conversion rates by integrating an AI chatbot within WhatsApp that can handle checkout processes directly in the chat interface.

Hypothesis

By enabling direct checkout through an AI chatbot in WhatsApp, we can reduce friction in the buying process and increase the conversion rate among users.

Test Group Design

- **Test Group**: Users who interact with the WhatsApp chat and are offered the ability to checkout directly through the chatbot.
- **Control Group**: Users who interact with the WhatsApp chat but follow the traditional route of being directed to the website to complete their purchase.

Implementation Steps

1. **Chatbot Integration**: Implement an AI chatbot that can complete transactions within WhatsApp.
2. **Feature Explanation**: Ensure the chatbot explains this new checkout feature to users.
3. **Transaction Handling**: Set up secure processing of payments directly within the chat interface.

Metrics

- **Primary Metric**: Conversion rate comparison between the test group and the control group.
- **Secondary Metrics**: User satisfaction ratings, time spent in the purchase process, and dropout rate at the payment stage.

Experiment 2: Impact of Loyalty Programs on High-Value Customers

Objective

Determine if introducing a loyalty program can increase purchase frequency and customer loyalty among high-value customers. eg Loyalty Points Quiz, Event-

Driven Points Accumulation and Gamified Engagement

Hypothesis

High-value customers will show increased purchase frequency and engagement when enrolled in a loyalty rewards program.

Cohort Description

High-Value Customers: Customers identified based on their high average order value or total spend on the website.

Implementation Steps

- Enrollment: Automatically enroll high-value customers in a loyalty program offering exclusive benefits.

- Exclusive Offers: Provide members-only discounts, early access to new products, and special rewards based on purchase milestones.

Metrics

Primary Metric: Repeat purchase rate before and after enrollment in the loyalty program.
Secondary Metrics: Average order value changes, loyalty program engagement levels, and retention rates.

Experiment 3: Conversion Optimization by UTM Source Personalization

Objective

Evaluate if personalizing content based on UTM source enhances conversion rates, leveraging targeted approaches such as content variation and tailored promotions.

Hypothesis

Personalized content tailored to specific UTM sources (such as social media, search engines, and direct links) will result in higher conversion rates compared to generic content.

Cohort Description

UTM Source Segments: Users are segmented based on their UTM source:

- **Social Media**: Engagements originating from platforms like Facebook, Instagram, and Twitter.

- **Search Engines**: Visitors coming from search engines like Google or Bing.

- **Direct Links**: Traffic from direct sources such as emails or direct URL entries.

Implementation Steps

1. **Content Customization**:

   - **Social Media**: Create visually appealing content that includes social proof and easy sharing options to cater to the social media crowd.

   - **Search Engines**: Develop content that is rich in keywords and focused on providing detailed product information.

   - **Direct Links**: Offer personalized greetings and promotions that recognize the direct interaction, such as special discounts for email subscribers.

2. **A/B Testing**:

   - Implement A/B tests to compare the effectiveness of personalized content versus standard content across different UTM segments.

   - Use dynamic content delivery technology to ensure that the right type of content is shown to the right segment.

Metrics

- **Primary Metric**: Conversion rate improvements within each UTM segment for personalized content versus control groups with standard content.

- **Secondary Metrics**:

- **Engagement Rates**: Track engagement metrics such as time on site and pages per session within each segment.
- **Customer Feedback**: Collect and analyze customer feedback on the personalized experience.
- **Revenue Per Visitor**: Compare revenue generated per visitor in personalized content groups versus control groups.

Innovative Ideas to drive more value from ai chatbot

1. **Transcript Analysis as a data source to drive more Interaction Depth & Engagement**

- **Chat Transcript Analysis**: Look for recurring questions or stumbling blocks that lead to incomplete checkouts.

- Creating a customer persona to better tailor the response from ai chatbot. Eg Gen z slang and Baby boomers language

- **On-Site Search Queries**: Capture what customers are searching for; high-volume queries might suggest missing or hard-to-find products/info.

2. **Innovative Omnichannel Retail Idea: Real-Time Store-Customer Integration**

   Kiosk Check-In with Biometric/QR Link

   - Upon entering the store, customers enroll at a kiosk using their mobile number or scan a unique QR code.

   - The kiosk has a built-in camera for face recognition (with user consent), linking the physical customer to their digital profile or chatbot session.

   In-Store Tracking & Personalized Assistance

   - Overhead or aisle cameras recognize the enrolled customer, tracking where they move, what they browse, and how long they linger.

- This data feeds into the chatbot in real time, enabling proactive prompts —"Looks like you're considering size M. Can I help compare other sizes?"—sent directly to the user's phone.

Real-Time Chatbot Engagement & Offers

- The same chatbot can push location-specific offers: "Today's 20% off on electronics is valid in aisle 3," triggered when the system detects the customer in the electronics section.

- If the user hesitates by a product, they receive instant FAQs, how-to videos, or styling tips on their smartphone without needing a store associate.

Seamless Checkout & Feedback Loop

- When ready, the user checks out via their mobile app or a self-checkout kiosk. The chatbot can recognize the items scanned in real-time and offer final upsells or complementary products.

- Post-purchase, the system prompts immediate feedback—"How was your experience? Rate your visit from 1–5!"—enabling store managers to react swiftly to dissatisfaction.

Data-Driven Personalization Across Channels

- All in-store behaviors (time spent browsing, items tried on, coupon usage) sync with the user's online account.

- Next time they log in or visit an online store, their recommended products reflect both **digital** and **physical** shopping histories, creating a true **omnichannel** experience.

Why It's Transformative

- **Personalized Engagement**: The chatbot dynamically assists based on real-world behavior, so the user feels guided even without a human store rep.

- **Increased Conversion**: Timely, location-based coupons and on-the-spot support reduce friction, boosting immediate purchases.

- **Analytics-Driven Insights**: By unifying online and offline data, retailers glean a holistic view of customer preferences, improving inventory decisions and

marketing effectiveness.