

ASSIGNMENT

1. Customer Support

Business Domain: Customer Support for an E-commerce Company.

2. High Volume of Repetitive Queries & Slow Resolution

Current Challenge/Inefficiency: Many e-commerce businesses face the challenge of managing a high volume of customer inquiries, especially those that are repetitive (e.g., "Where is my order?", "How do I return an item?", "What are the payment options?"). These queries often flood human customer service agents, leading to:

- **Longer wait times:** Customers have to wait in queues, leading to frustration.
- **Agent burnout:** Repetitive tasks can lead to low morale and high turnover among human agents.
- **High operational costs:** Maintaining a large team of human agents for routine tasks is expensive.
- **Inconsistent responses:** Different agents might provide slightly varied answers, leading to confusion.

This inefficiency directly impacts customer satisfaction and the company's bottom line.

3. Intelligent Customer Support Agent (ICSA)

AI Agent Proposal: We propose an **Intelligent Customer Support Agent (ICSA)**, which will be an AI-powered chatbot and voicebot system integrated into the e-commerce website and mobile app.

Its tasks, interactions, and capabilities will include:

- **24/7 Availability:** ICSA will be available round the clock, providing instant support to customers regardless of time zones.
- **FAQ Handling:** It will be trained on a comprehensive knowledge base to answer frequently asked questions instantly and accurately.
- **Order Tracking:** Customers can provide their order ID, and ICSA will fetch real-time tracking information.

- **Product Information:** It can provide details about products, specifications, and availability.
- **Troubleshooting Guidance:** For common issues (e.g., login problems, payment failures), ICSA will guide users through step-by-step troubleshooting.
- **Return/Refund Process Initiation:** It can guide customers through the return policy and even initiate a return request by collecting necessary details.
- **Personalized Recommendations:** Based on past purchase history or browsing behavior, ICSA can suggest relevant products.
- **Seamless Handover:** For complex or sensitive issues that require human empathy or in-depth problem-solving, ICSA will seamlessly escalate the conversation to a live human agent, providing the agent with the chat history for context.
- **Multilingual Support:** Capable of interacting in multiple languages to cater to a diverse customer base.

4. Measurable Benefits

The implementation of the Intelligent Customer Support Agent (ICSA) is expected to yield significant measurable benefits:

1. Reduced Average Customer Resolution Time (ACRT) by 40%:

- Currently, routine queries might take 5-10 minutes to resolve via human agents due to wait times and manual data retrieval. ICSA can resolve these instantly (within seconds).
- Complex queries, while still escalated, will have pre-collected information from ICSA, reducing the human agent's investigation time.
- **Measurement:** Track the average time from customer query initiation to resolution, comparing pre-ICSA and post-ICSA deployment data.

2. Increased Customer Satisfaction (CSAT) Score by 15%:

- Faster responses, 24/7 availability, and consistent, accurate information will lead to a more positive customer experience.
- Reduced frustration from waiting and repetitive explanations will improve overall sentiment.
- **Measurement:** Conduct post-interaction surveys (e.g., "How would you rate your experience with our support?") and analyze the CSAT score before and after ICSA implementation.

Bonus (Optional): User Interaction Sketch

The user will primarily interact with the AI Agent through a **web-based chat interface** embedded on the e-commerce website and mobile application.

- **Initial Interaction:** When a user clicks on the "Support" or "Help" icon, a chat window will pop up. The ICSA will greet the user with a friendly message like, "Hi there! How can I assist you today? You can ask me about your order, returns, products, or anything else."
- **Text Input:** Users will type their queries into a text box.
- **Quick Reply Buttons:** For common questions, ICSA might offer pre-defined quick reply buttons (e.g., "Track Order," "Return an Item," "Payment Issues") to guide the user.
- **Voice Input (Optional):** A microphone icon will allow users to speak their queries, which the ICSA will convert to text for processing.
- **Visual Elements:** The chat interface will use clear, readable fonts, rounded corners for chat bubbles, and potentially product images or links when providing product-related information.
- **Handover Prompt:** If the ICSA determines it cannot resolve the issue, it will politely ask, "This seems like a complex issue. Would you like me to connect you with a human agent?" Upon confirmation, it will transfer the chat to a live agent, providing the full conversation transcript.
- **Feedback Mechanism:** After each interaction (or handover), the user will be prompted to rate the interaction, helping to continuously improve the ICSA's performance.

This multi-modal and intuitive interaction design ensures ease of use and accessibility for all customers.