

Whatsapp Integrated Shopping Experience

Team

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3. Department: SCOPE

Work-let expected duration – 6 months

Problem Statement

To build a SmartBot integrated with WhatsApp, to enable Samsung customers to buy products online through WhatsApp chat interface.

- Integrate shopping experience end to end with WhatsApp Messenger using WhatsApp Business API
- Payment options such as Samsung Pay, WhatsApp Pay, Credit/Debit card should be available
- Secure integration of SmartBot with Samsung e-store for easy selection of products on e-store
- Multilingual bot – with English, Hindi as current Language options and scope for future expansion
- Human escalation pathway- Agent handoff and Phone number/ Email/ Web Support/ in-store visit prompts
- Low code dynamic platform to easily integrate future WhatsApp upgrades
- Develop a scalable solution with possible future implementations on Facebook Messenger, Telegram and other applications

References:

- <https://respona.io/blog/how-to-get-whatsapp-api>
- <https://www.techtarget.com/searchenterpriseai/definition/natural-language-understanding-NLU>
- <https://developer.nvidia.com/blog/?r=1&tags=&categories=conversational-ai>

Expectations

- Integrate Samsung e-store with WhatsApp
 - Procure permissions and use WhatsApp Business API for integration.
 - Utilise APIs for e-store – WhatsApp integrations
 - Channel interaction from WhatsApp to e-store shopping catalogue and back to WhatsApp for transaction completion
- Multilingual User friendly shopping experience
 - Present interactive user interface to customer, prompt Samsung e-store catalogue and navigate to e-store website
 - Fetch items added in cart and process for checkout
 - Get additional user information such as Name, Address, Payment information
 - Based on selected payment method complete transaction, confirm order and generate invoice
 - Divert to human interaction options as an escalation pathway
- Integration with payment apps
 - Get Payment information of the user
 - Enable secure payment of Cart amount and apply any offers/discounts/ cashbacks

Training/ Pre-requisites

- Good knowledge of Natural Language Understanding
- Good hands on in Chatbot development, API Integrations, UI development
- Designing Chat services, utilising AI engines, integrating applications, permission for using WhatsApp Business API

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Members

Kick Off < 1st Month >

- Understanding NLU concepts and AI engines
- Understand API integrations, Secure Payment app integrations
- Do hands on by applying e-store integration with WhatsApp Business API and explore different Payment option integration

Milestone 1 < 2nd Month >

- Develop user friendly and interactive user interface
- Utilize WhatsApp Business API for E2E integration with WhatsApp Messenger
- Explore implementation of multilingual capability for the bot

Milestone 2 < 4th Month >

- Design interface for Payment information inputs from the user
- Securely integrate with Samsung e-store for interaction to and from WhatsApp messenger
- Integrate Samsung Pay, WhatsApp Pay and other Payment methods
- Enable Agent handoff as an escalation pathway

Milestone 6th Month >

- Publish final User Interface for Customer interaction with the Bot
- Allow customer to choose Payment gateway and process payments securely
- Save Customer details and publish on customer revisit for a faster journey
- Generate Invoice with billing details

Literature survey and study

- Major Observations / Conclusions:

1. **TOPIC - “Development of An e-commerce Sales Chatbot”**

Survey

- This project aims to build an automated response system (Chatbot) that responds to customer queries on social networking platforms (Twitter) to accelerate the performance of the service.
- The construction of an e-commerce sales chatbot is discussed in this article with the goal of enhancing customer service and boosting sales. For natural language comprehension, the system leverages machine learning. The framework for the chatbot was constructed using modules. Multiple components make up the system. an online platform for training natural language. The second is a microservice that separates entities from input text and classes them. Finally, there is a framework that forwards user requests to a certain controller for processing before serving the response.
- The main challenge or shortcoming of this paper is that, using the algorithms in this can be very difficult as it uses a complex and scattered waveform observation.

Links - https://www.researchgate.net/publication/348668779_Development_of_An_e-commerce_Sales_Chatbot

Literature survey and study

- Major Observations / Conclusions:

- 2. **TOPIC** - Development of an E-commerce Chatbot for a University Shopping Mall.

Survey

- In This project, a chatbot (called Hebron) was built for online shopping experience for the University shopping mall of Covenant University of Ogun state in Nigeria .
- The goal of the chatbot is to converse intelligently, precisely, and in real time with the students. Thus, before going to the mall, students can use the chat feature to ask the bot questions about specific things they want to buy and make payments online. In order to provide a 24-hour online service, the chatbot will be accessible via portable mobile devices or PCs that students may log in to from anywhere and at any time on campus. This endeavour will eliminate the discomfort experienced by Covenant University students who visit CUSM to look for out-of-stock or unavailable commodities. The author also mentioned about the development of delivery system in future.
- Technologies Used : React.js for front end (Interface)
MySQL storing data in Database
Spacy and Recast.ai for ML using Python
- Challenges : The main challenge of this project is the NLP part where the model must map user's message to the product and replying with message that answers all of user's query.

Links

https://www.researchgate.net/publication/350217519_Development_of_an_E-Commerce_Chatbot_for_a_University_Shopping_Mall/link/616d8005039ba2684460156e/download

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2. **Link**

https://www.researchgate.net/publication/322855718_Chatbots_-_An_Interactive_Technology_for_Personalized_Communication_Transactions_and_Services

- Challenges :

(Discuss in the form of bullets, what are the next action steps, any roadblocks / bottlenecks)

1. Should it be a Chatbot or a WhatsApp shopping cart
2. Do the models need to be made from scratch
3. Where do we fetch the Samsung products from

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Thank you