



# PERSONALIZED MALL GUIDE

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**Abstract :** *Chatbots are applications that simulate human chat with Artificial Intelligence (AI). It is intended to be the ultimate virtual assistant, serving as a source of entertainment while assisting users with duties starting from answering inquiries to providing driving directions, converting the thermostat into a sensible home, playing one's favorite songs, etc.*

*A chatbot is becoming more common in companies because it can all at once minimize customer service costs and accommodate many users. On the opposite hand, Chatbots must be as efficient as possible when performing certain tasks. To resolve this problem, this report provides a chatbot interface that gives an efficient and reliable way to explore mall premises, retail stores, restaurants, or other services within the mall's vicinity. Backend is used to provide responses at any moment to satisfy customers by providing them direction in an interactive way. As this is a web-based interface there's accessibility across many devices and users don't need to install any kind of application on their mobile. Easy to integrate with the mall website, any mall may use this chatbot to guide visitors for the directions in an immersive way.*

**Index Terms - Artificial Intelligence, Chatbot, Mall, Natural Language Processing**

## I. INTRODUCTION

Shoppers arrive at your retail store with varying degrees of product knowledge and different types of shopping lists. Some know exactly what items they need, even down to the brand, others know generally what store departments to look in, while some arrive without a list and looking for inspiration on what to purchase. Personalized Mall Guide will service malls to provide customers with free resource to information required to surf mall. Interactive mapping and way-finding for malls allow shoppers to search and discover the retailers and services available in the mall while delivering valuable insights back to business. Our mall chatbot makes it easy to manage your digital maps as well as retailers, restaurants, shops, and their location details. Whether your shopping center is standalone or located within airports, resorts, amusement parks, etc.

## II. LITERATURE SURVEY

SR. NO.	PUBLISHED YEAR [REF.]	TITLE	METHODOLOGY	DESCRIPTION
1	2021	Development of an E-Commerce Chatbot for a University Shopping Mall  <a href="https://www.hindawi.com/journals/acisc/2021/6630326/">https://www.hindawi.com/journals/acisc/2021/6630326/</a>	NLP	Chatbots have been used in many fields ranging from education to healthcare and are also used in e-commerce settings. (is research aims at developing a web-based chatbot called Hebron for the Covenant University Community Mall. (e chatbot is developed using Python and React.js as the programming languages and MySQL (Structured Query Language) server as the database to give a structure to the e-commerce datasets and Admin Portal process. (e e-commerce chatbot application for Covenant University Shopping Mall (CUSM) seeks to provide an easy, smart, and comfortable shopping experience for the Covenant University Community.
2	2021	For e-commerce sales  <a href="https://ieeexplore.ieee.org/document/9322667">https://ieeexplore.ieee.org/document/9322667</a>	Machine Learning	This paper presents the development of an e-commerce sales chatbot in order to provide customer support and increase sales. The system uses machine learning for natural language understanding. It is developed on an modular chatbot framework. The system has several components. First, a web based natural language training platform. Second, a microservice to classify input text and extract entities. Finally, a framework which routes user request to specific controller for processing and serves the response.
3	2021	Mall directory navigation through robotic assistance  <a href="https://ieeexplore.ieee.org/document/8301771">https://ieeexplore.ieee.org/document/8301771</a>		Malls are full of retail store and restaurant chains, allowing customers a vast array of destinations to explore. Often, these sites contain a directory of all stores located within the shopping center, allowing customers a top-down view of their current position, and their desired store location. In this paper, we present a customer centric approach to directory navigation using a service robot, where the robot is able to display the directory, and guide customers to needed destinations.

### **III. PROBLEM STATEMENT**

Shoppers arrive at your retail store with varying degrees of product knowledge and different types of shopping lists. Some know exactly what items they need, even down to the brand, others know generally what store departments to look in, while some arrive without a list and looking for inspiration on what to purchase.

### **IV. PROPOSED SYSTEM**

An AI chatbot that receives users' questions, attempts to understand and answers the question. This is achieved by conveying an English word into a user-friendly query, then progressing through data to seek the relevant information and then retrieving the answer in a natural language phrase. In other words, it answers your questions like a human, rather than mentioning the possible websites. The aim is to give customers and visitors a fast and a simple way to address their questions and to offer other developers the ways in which this Chatbot can be implemented into their projects.

### **V. GOALS & OBJECTIVES**

The goal is to design a system which can guide the customer to their desired store.

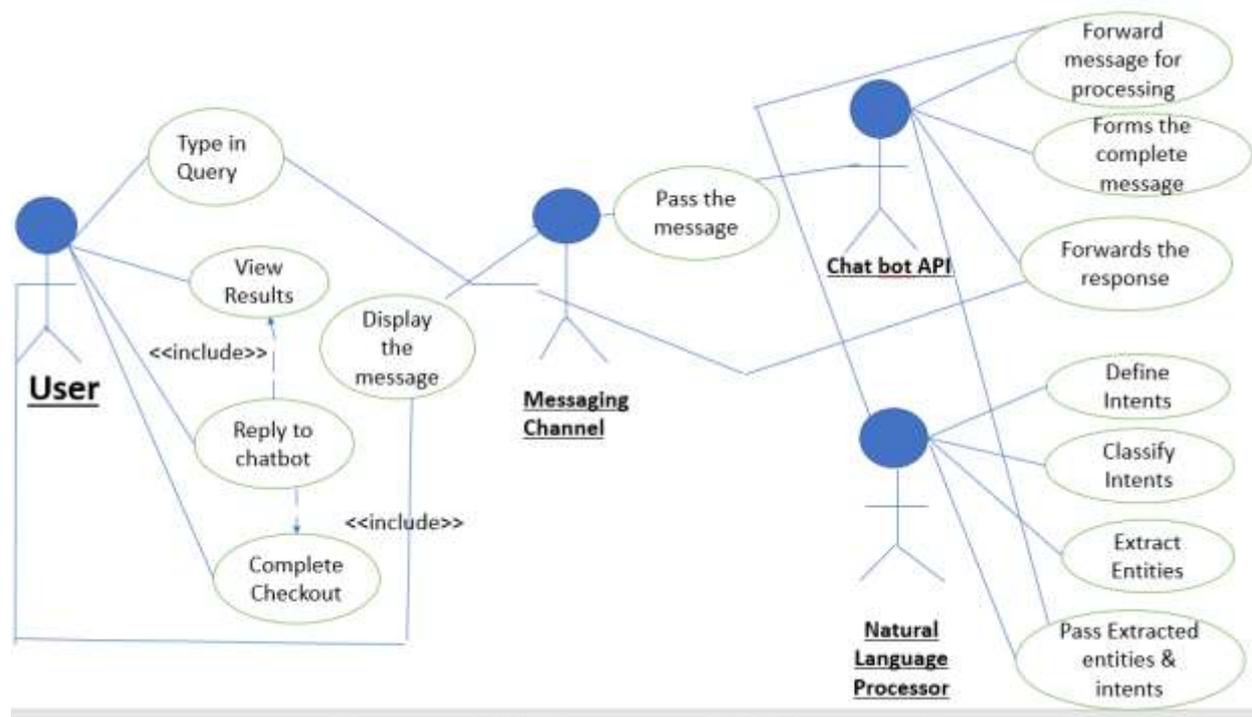
### **VI. MOTIVATION**

- The mall faces difficulty to navigate & many times it happens that visitors had limited time for shopping for what they are looking.
- Communicating all the information which Shopping Mall wants for the users to know through physical or non-interactive platform wasn't easy.
- A chatbot guide can help each of these shopper types with information at their fingertips.

### **VII. SCOPE**

- An AI chatbot that receives users' questions, attempts to understand and answers the question.
- This is achieved by conveying an English word into a user-friendly query, then progressing through data to seek the relevant information and then retrieving the answer in a natural language phrase.
- In other words, it answers your questions like a human, rather than mentioning the possible websites.
- The aim is to give visitors and website visitors a fast and a simple way to address their questions and to offer other developers the ways in which this Chatbot can be implemented into their projects.

## VIII. ARCHITECTURE OF THE PMC



## XI. CONCLUSION

All information on a single interface is always difficult without the complexities of navigating through several forms and windows. The mall guide chatbot aims to alleviate this issue by delivering an interface to address visitors queries which are common and user friendly. The chatbot system's goal is to imitate a conversation. Its architecture combines a language model and a computational algorithm to understand information online, using human language and communication between a human and a computer. The key aim of the project is to create an algorithm to identify answers to questions posed by visitors. To develop a database where all the related data is stored and to develop a web interface.

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