A Project Report on

Chatbot-Pizza Ordering

Submitted in partial fulfillment of the requirements for the award of the degree of

Bachelor of Engineering

in

Computer Engineering

by

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UNIVERSITY OF MUMBAI

Academic Year 2019-2020

Approval Sheet

This Project Report entitled ***"Chatbot-Pizza Ordering"*** Submitted by ***"Sayali Kamble"(16102039),"Zahid Khan"(16102051),"Vishal Jain"(16102044)***is approved for the partial fulfillment of the requirement for the award of the degree of ***Bachelor of Engineering*** in ***Computer Engineering*** from ***University of Mumbai***.

Prof. Archana Kotangle
Guide

Prof. Sachin Malve
Head Department of Computer Engineering

Place:A.P.Shah Institute of Technology, Thane
Date:

CERTIFICATE

This is to certify that the project entitled ***"Chatbot-Pizza Ordering"*** submitted by ***"Sayali Kamble" (16102039), "Zahid Khan" (16102051), "Vishal Jain" (16102044)*** for the partial fulfillment of the requirement for award of a degree ***Bachelor of Engineering*** in ***Computer Engineering***,to the University of Mumbai,is a bonafide work carried out during academic year 2019-2020.

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Date:

Declaration

We declare that this written submission represents our ideas in our own words and where others' ideas or words have been included, We have adequately cited and referenced the original sources. We also declare that We have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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Date:

Abstract

Chatbots are computer programs that are developed using Artificial Intelligence for providing an easy interference between the computer and humans . The interaction can be textual or auditory depending upon the need. The technology at the core of the rise of the chatbot is Natural Language Processing(NLP). We are going to develop a chatbot using tensor flow for generating neural network models , deep learning and use NLP for maintaining the conversation. Chatbots can be used in Customer service , sales/marketing and also as a human resource . Chatbots are beneficial in many ways as they offer 24/7 service , improves customer satisfaction and reduces cost .

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List of Abbreviations

IDS:	Intrusion Detection System
WSN:	Wireless Sensor Network
MANET:	Mobile Ad-Hoc Network
AODV:	Ad-Hoc On-demand Distance Vector Routing
DSR:	Dynamic Source Routing Protocol
NS2:	Network Simulator 2
ACK:	Acknowledgement
AGT:	Agent
RTR:	Router

Chapter 1

Project Conpetion and Initiation

1.1 Introduction

One of the most emerging trend in the development of robotics is Chatting robot.
Chat bot is a computer program which conducts a conversation via textual or auditory method.
This chatbot project is a android application chatting interface for ordering pizza that will be developed using Artificial Intelligence algorithms.

1.2 Objective

1.Quick and easy to use interface for customers.

2.To support and scale up the business of a Pizza Restaurant .

3.Knowing the order patterns for frequent customers.

1.3 Problem Definition

To Design and Develop a Chatbot for a pizza restaurant that would overcome the problems like unable to keep track of ordering patterns for frequent customers and customer feedback .

1.4 Scope

The Proposed chatbot will be useful in easy handling a pizza restaurant app . This chatbot will help a customer to order a pizza using a text or voice based chat .

The customer will also be able to search for different variety of pizza options available using the chat console . The customer can also apply the coupons and then calculate the total payable amount for the pizza .

1.5 Technology Stack

1.Dialogflow
Dialogflow is an end-to-end , build-once deploy-everywhere development suite for creating conversational interfaces for websites , mobile applications ,messaging platforms and IoT devices .

2.Android Studio
Development of an android application .

1.6 Benefits for Society

1.Accessible anytime
More time is been wasted till operators connect customers to a customer care executive. They are replacing live chat and other forms of slower contact methods such as emails and phone calls.

2.Handling Capacity
Unlike humans who can only communicate with one human at a time, chat bots can simultaneously have conversations with thousands of people. No matter what time of the day it is or how many people are contacting you, every single one of them will be answered immediately.

1.7 Application

1. Content delivery:
A lot of publishers are also harnessing AI and machine learning technology within their chatbots to anticipate what content their consumers may be interested in.

2. Book Flights:
Chatbot gives their customers the ability to search for and book flights in a text-based conversational manner. Instead of drop-down menus, customers enter the information themselves.

3. Companionship:
A Russian company has developed its companion chatbot for Senior People and Patients with Alzheimer's Disease. The primary function of the chatbot is to be a virtual companion – To speak with senior people on general topics like the weather, nature, hobbies, movies,

music, news, etc.

Chapter 2

Literature Review

A. An Intelligent web-based voice chat bot
Salomon Jakob's du Preez , Manoj Lall and Saurabh Sinha, An Intelligent Web-Based Voice Chat Bot, in EUROCON 2009, EUROCON '09. IEEE, 2009, p. 386
This paper deals with the working of AIML based chat robot. A Java Program is developed which convert AIML files into database. This program is embedded into website which can in turns help its customers to develop bots. The major technological enhancement in this research is integrating speech recognition and text to speech converter. This empowers the bots to respond to user queries using voice instead of text and humans to chat with bots using voice instead of text messages.

B. Chinese Intelligent Chat Robot Based on the AIML
Wei Yun-Gang, Sun Bo, Sun Ming-Chen, Zhao Cui-Yi, and Ma PeiZi, "Chinese Intelligent Chat Robot Based on the AIML language", in Sixth International Conference on Intelligent Human-Machine Systems and Cybernetics, 2014, p. 368.

This paper explains the language enhancements in the field of Chatting Bot Development system. Here, the bot developed is in Chinese Language known as Chinese Intelligent Chat Robot Xiao Hui-hui. This major technological enhancement in this research paper is language enhancement that AIML can be used not only to develop bots in English Language but also in many other foreign languages such as Chinese, Japanese, Indonesian, Hindi, Marathi etc.

C. Development and Implementation of a chat bot in a Social Network
Salto Martínez Rodrigo, Jacques García Fausto Abraham, Development and Implementation of a Chat Bot in a Social Network, in Ninth International Conference on Information Technology - New Generations, 2012, p. 751

This paper describes the linking of chat bot with social network. It describes that how a chat bot can be linked with Twitter to entertain the users. It can also be used for advertisements. The bot is linked with Twitter since it parts from a simple concept, the exchange

of short messages no longer than 140 characters which drastically reduces the amount of information and the way it is published. The algorithm process in this bot is divided into three different parts:
1 Message reception.
2 Message processing.
3 Generation of a suitable reply.

Chapter 3

Project Design

3.1 Proposed System

The given system will be a chatbot that will be simply intergrated with a pizza ordering existing system .
The process of ordering a pizza becomes much more simpler with the help of a bot .
A customer can search for variety of pizzas , choose, customize and check for prices of the pizza using the chatting interface .

3.3.1 Description of Use Case Diagram

1.Customers can search for different type of pizzas , if they wants to order a pizza then they need to provide login id and password details and then the order gets placed . Customers can also check prices of the pizza , apply suitable coupons and update their profiles .

2.A pizza delivery outlet can see the placed orders , prepare for them and subsequently assign a delivery boy to drop the order .

3.A super admin can will have full control over the application .

3.2 Activity Diagram

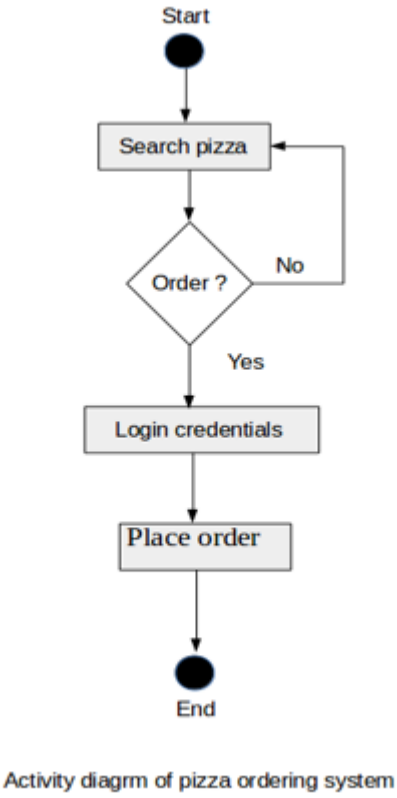

Figure 3.1: Activity Diagram

3.3 Use Case Diagram

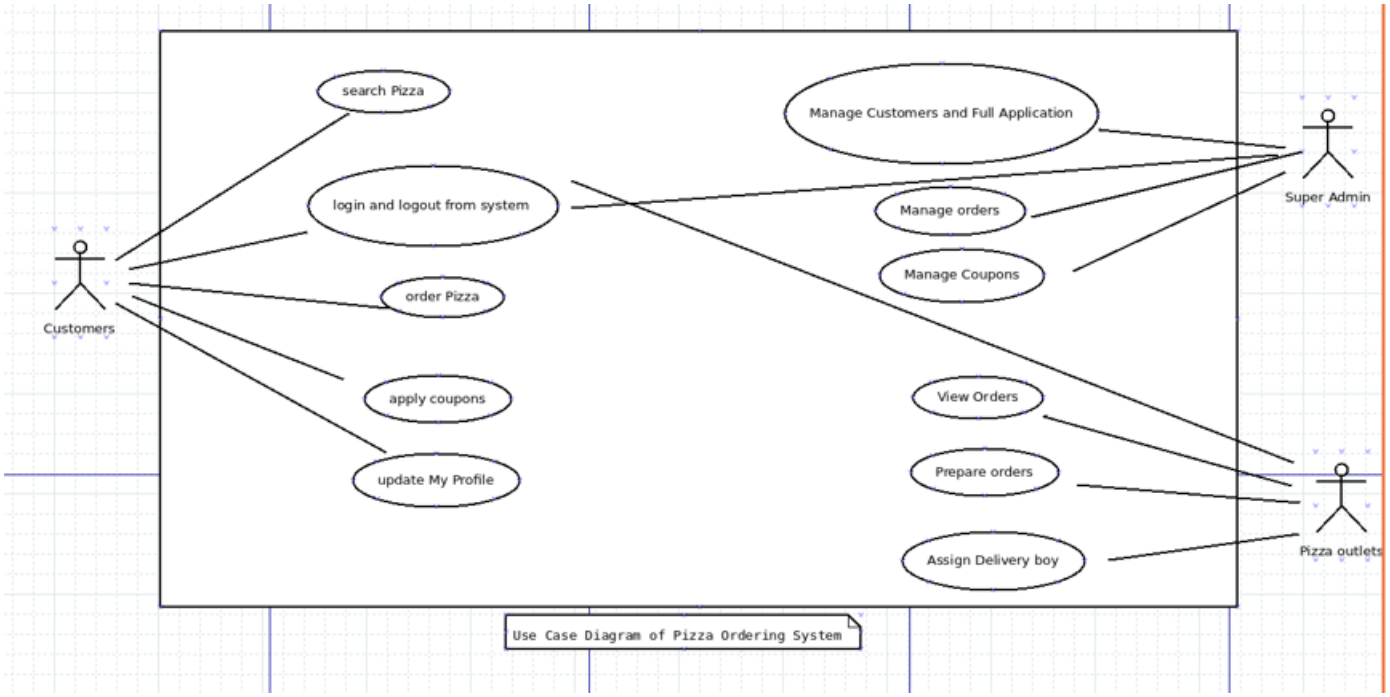

Figure 3.2: Use Case Diagram

Chapter 4

Chapter 4

Add your chapter Name

Chapter 5

Result

This shall form the penultimate chapter of the report and shall include a thorough evaluation of the investigation carried out and bring out the contributions from the study. The discussion shall logically lead to inferences and conclusions as well as scope for possible further future work.

Parameters	**Wormhole Attack**	**AODV**
Total No.of Sent Packets	85068	85068
Total No.of Received Packets	16252	68068
Total No.of Drop Packets	61948	16864
Throughput	98.01	410.24
Delay	0.0244	0.1528
Jitter	23.93	100.16

Table 5.1: Wormhole Attack Comparison with AODV Protocol

Chapter 6

Conclusions and Future Scope

This will be the final chapter of the report. A brief report of the work carried out shall form the first part of the Chapter. Conclusions derived from the logical analysis presented in the Results and Discussions Chapter shall be presented and clearly enumerated, each point stated separately. Scope for future work should be stated lucidly in the last part of the chapter.

Bibliography

[1] B. R. Ranoliya, N. Raghuwanshi and S. Singh, "Chatbot for university related FAQs," in Advance in Computing, Communications and Informatics (ICACCI), 2017.

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[3] N. Thomas, "An e-business chatbot using aiml and lsa," in Advances in Computing, Communications and Informatics (ICACCI), 2016 International Conference on. IEEE, 2016, pp. 2740–2742.

[4] B. Setiaji and F.W. Wibowo,"Chatbot using a knowlegde in Database: Human-to-Machine conversation Modelling" in Intelligent systems, modelling and simulation(ISMS),2016 7th International Conference on , Bangkok, Thailand .

Appendices

Detailed information, lengthy derivations, raw experimental observations etc. are to be presented in the separate appendices, which shall be numbered in Roman Capitals (e.g. "Appendix I"). Since reference can be drawn to published/unpublished literature in the appendices these should precede the "Literature Cited" section.

Appendix-A: NS2 Download and Installation

1. Download ns-allinone-2.35.tar.gz from http://sourceforge.net/projects/nsnam/

2. Place ns-allinone-2.35.tar in your desired directory; like /home/vishal.

3. Go to terminal and do as following commands
sudo apt-get update
sudo apt-get install automake autoconf libxmu-dev build-essential

4. Extract ns-allinone-2.35 and after extracting go to folder ns-allinone-2.35 from Terminal as
$cd ns-allinone-2.35
$./install

5. Path Setting
$ gedit .bashrc

This command will open an existing file in editor. Just put the following path which is given bellow. [Remember that our ns-allinone path is /home/vishal. we will change this path according to our ns-allinone folder's path]

export PATH=$PATH:/home/vishal/ns-allinone-2.35/bin:/home/vishal/ns-allinone-2.35/tcl8.5.10/unix/home/vishal/ns-allinone-2.35/tk8.5.10/unix

export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/home/vishal/ns-allinone- 2.35/otcl-1.14:/home/vishal/ns-allinone-2.35/lib

export TCL_LIRARY_PATH=$TCL_LIBRARY_PATH:/home/vishal/ns-allinone-2.35/tcl8.5.10/library

After this save and exit.

6. Now type in terminal to check that, is all command we entered in .bashrc is correct or not? And To take the effect immediately
$source .bashrc

7. Then perform the validation test using this command.
$ ./validate

8. Run ns2 using this command
$ns

We will get % prompt in our terminal. Now ns2 has been installed.

Acknowledgement

We have great pleasure in presenting the report on **Chatbot-Pizza Ordering.** We take this opportunity to express our sincere thanks towards our guide **Prof. Archana Kotangale** Department of Computer Engineering, APSIT thane for providing the technical guidelines and suggestions regarding line of work. We would like to express our gratitude towards his constant encouragement, support and guidance through the development of project.

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Publication

Paper entitled **"Chatbot using Tensorflow for Small Businesses"** is presented at **"International Conference on ICICCT(2018)"** by **"Rupesh singh".**