



# Artificial Intelligence in Chatbot Website Platform

Agreianti Puspitasari<sup>1</sup>, Yeni Fajariyanti<sup>1</sup>, Myrtana Pusparisti<sup>1</sup>, Agustin Amborowati<sup>1</sup>, Muhammad Tafdhil<sup>1</sup>

<sup>1</sup> Universitas Sebelas Maret Surakarta, Indonesia.

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Corresponding Author:

Agreianti Puspitasari

[agreianti@staff.uns.ac.id](mailto:agreianti@staff.uns.ac.id)

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**Abstract:** In computing discourse, a Chatbot is a computer programme that is specifically designed to simulate an interactive communication or conversation. The interactive communication is from the machine to the user (human) either through text media, sound media or visual media. Chatbots have been widely used for practical purposes such as online assistance, personalised services, or information acquisition, including in the world of global marketing. The purpose of this research is to describe how a chatbot platform provides its best function in supporting a marketing task of a corporation at a global level. The methods used in this research are: 1) System Analysis, which is the collection of information needed in building the system must be done in detail. Where this information will support all the components needed to obtain results that are in accordance with all the needs related to the design of the system to be input, 2) Preparation of flowcharts, namely the design by entering data on the status of conversations that are commonly carried out by the Help-Desk with customers. Where when the user enters a word or sentence in the column that is already available in the system, a word or sentence search process will be carried out based on the noun, this process is useful for matching whether the input given by the user is in the set of nouns that have been trained in dialogue flow. The result obtained is that the website becomes one of the company's main media in marketing its products because the website already includes all information related to the product and also related to the company. However, when using the website alone, there is no direct communication with potential buyers. Therefore, this research will develop a chatbot that can improve the performance of the Spicering ltd website.

**Keywords:** Artificial Intelligence; Chatbot; Website

## Introduction

The rise of AI is not taking place in isolation from the rapid, wider advance of technology, whether in front-line operations such as contact centers, or the management (Jeffares, 2020; Stone et al., 2020). This many businesses currently use chatbot artificial intelligence to support company work, one of which is in the marketing sector. Some research related to chatbot development in business is research on chatbot design that is used to improve business performance by recording orders, order processing, customer records, business locations, and financial transactions (Amalia & Wibowo, 2019). Chatbot is also used as a service improvement, one of which is service in hotels (Putri et al., 2019). Research results show, from a prototype application developed to improve hotel services,

chatbots help personalize services to customers, can accommodate customer needs and as additional facilities from hotels (Buhalis & Cheng, 2020; Ukpabi et al., 2019). Chatbots are also used to help market agricultural products (Sivakumar et al., 2023).



Figure 1. Illustration of AI model

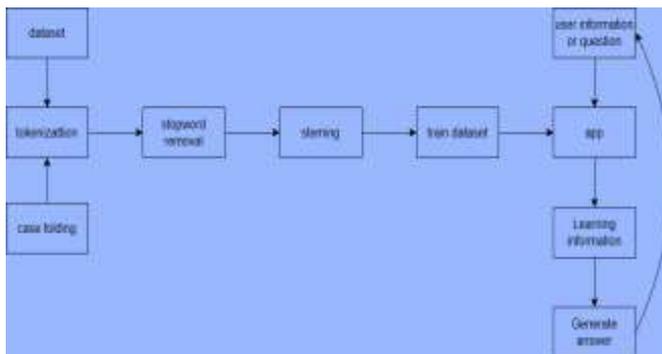
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The research system developed is a chatbot to connect farmers and consumers, so that farmers will get a good and profitable selling price and consumers can get fresh agricultural products (Mhlanga, 2023). In this research, we will also develop a chatbot that supports activities in marketing spice export products at PT Spicering Rempah Indonesia. It is one of the corporation engaged in processing spice products for international market.

**Method**

The methods used in this research can be explained narratively and graphically as described below. Gathering the information needed in building the system must be done in detail. Where this information will support all components needed to obtain results in accordance with all needs related to system design that will be input (Bachmann et al., 2022; Harahap & Fitria, 2020). The first is dataset, case folding, tokenization, stopword removal, stemming, train dataset and he last is the application test.



**Figure 2.** Flow of Chabot Design

The design is by entering data on the status of conversations that are commonly conducted by the HelpDesk with customers. Where when the user enters words or sentences in the columns that are already available in the system, a word or sentence search process will be carried out sentences based on nouns, this process is useful for match whether the input given by user is in the set of nouns that have been trained in dialogueflow. in dialogue flow. After the word or sentence is finished processed, a specific response will come out according to the with the keywords received. The result of the answer that will come out in the form of sentences or images. When the processed word or sentence does not find a noun in it, the result will immediately come out in the form of small-talk (Harahap & Fitria, 2020).

**Result and Discussion**

*Chabot: A Definition*

A chatbot is a computer programme that designed to simulate a conversation or interactive communication to users (human) through the form of text, voice, and/or visuals (Ciechanowski et al., 2019; Jain et al., 2018; Rapp et al., 2021). Conversations that occur between computers with humans is a form of response from programme that has been declared in the database programme database on the computer. The ability of the computer in storing large amounts of data without forgetting any of the information it stores combined with the practicality of asking the source of information compared to searching for information on your own, as well as the and its learning capabilities makes chatbots a reliable customer service customer service (Hormansyah & Utama, 2018).

Chatbot technology is one form of application of Natural Language Processing, NLP itself itself is one of the branches of science Artificial Intelligence that studying communication between humans and computers through natural language (Adamopoulou & Moussiades, 2020; Hormansyah & Utama, 2018). A chatbot is a computer programme that simulates intelligent conversation. The chatbot process starts with input from the user using natural language and the system will answer with a response that makes sense or can be said to be intelligent for real language (Mashud & Wisda, 2019).

Definition of Artificial Intelligence is one part of computer science that makes machines computers can do work like and as well as those done by humans (González et al., 2019; Russell, 2019; Wang, 2019). At the beginning of its creation, computers only functioned as a calculator only. But along with times, the role of computer is increasingly dominating the lives of mankind. Computers are no longer used as a calculating tool, more than, computers are expected to be empowered to do everything that humans can do (Ma & Sun, 2020) that can be done by humans. In order for a computer to act as and as good as humans, then the computer must also must be provided with knowledge, and have the ability to reason. For this reason, AI will try to provide some methods to equip the computer with these two these components so that the computer can become a smart machine.

Chatbot technology is one form of application of Natural Language Processing, NLP itself itself is one of the branches of science Artificial Intelligence that studying communication between humans and computers through natural language. Model computing model like this is useful to facilitate communication between humans and computers in in terms of

information retrieval, so that there can be an interaction between the two using natural language (Afrianto, 2015).

Along with the increasingly fierce marketplace competition, promotion is always required because promotion is one of the important aspects in achieving company goals. To win the competition and achieve the goals that have been set, the marketplace must carry out a promotional strategy with careful, clear and careful analysis and thinking. In this case, a promotional strategy can be likened to a road guide and an operational tactic, so that if the company does not do it, then achieving the goals that have been set will be difficult to realise. A promotional strategy will be optimally carried out, if the company interacts with the organisation's market, competitors and also environmental factors (Fatihah & Saidah, 2021).

AI with its underlying aspects can help companies improve their business, thus creating an increasing need for its use (Canhoto & Clear, 2020; Enholm et al., 2022). However, there are also aspects of weaknesses in the use of AI that need to be considered, such as AI does not recognise emotions and ethics or morals. Therefore, if human dependence on the use of AI technology increases, there needs to be a regulation that can provide limitations on things that can be legally accounted for (Adi, 2022; Clarke, 2019; Rodrigues, 2020).

A research shows that the results of browsing on Facebook social media are a phenomenon, where the level of browsing and intensity of using f-commerce can encourage the desire to buy and impulse purchases (Leong & Sung, 2018). Other research also shows how the internet benefits MSMEs in international marketing by using websites and platforms, where the results show that platforms can provide information to customers intensively and responsively related to product complexity but websites are still considered less effective in increasing export capabilities. Some of this research shows that in international marketing there is a need for internet media to encourage increased sales using both platforms and websites. Seeing that some research shows the lack of effectiveness of websites in international marketing, this research will develop a website with chatbot artificial intelligence to increase interaction and communication intensity with international customers.

#### *Desgin Chatbot Model*

The chatbot that will be developed is a website chatbot. The website chatbot was chosen by the company because one of the platforms that can be used well for export marketing is the website. This chatbot development uses Python, JavaScript, Object notion (Json), Html + CSS. The application used in coding is Virtual

Studio Code. 1) Python is used to train chatbot models that use Natural Language Processing (NLP). This Chatbot model is trained with the Neural Network Algorithm method, which is an algorithm model that is close to the human brain, which can provide stimulation or stimulation, process, and provide output to find relationships between data sets, 2) JavaScript is used to create chatbot data sets, 3) Object Notion (Json) is a text-based file format, generally used in the process of exchanging data between server and client, 4) Html + CSS is used to create a website and chatbot display. Virtual Studio Code is the software used to do the coding in this chatbot (Ismail & Ade-Ibijola, 2019).

Dataset: create scrib data for chatbot patterns and responses. The patterns used are related to: greeting, spicebot text (explaining about spicebot), explanation about spicing, spicing products, packaging, price, purchase (minimum order), how to purchase, bulk purchase, more info. Example patterns in the dataset.



**Figure 3.** Paternt dataset

Case Folding is data processing by uniforming the characters in the data. Furthermore, using NLTK (Natural Language Tool Kit) tools in the form of Tokenization, stopword removal and stemming. Tokenization is done to divide text in the form of paragraph sentences, or documents into tokens or certain parts. Stopword Removal is part of the text preprocessing stage which aims to remove irrelevant words in a sentence based on the stopword list, for example the words "yes", "in", "to", and others. Stemming is part of the process of returning words to basic words. Train dataset is the process of training or training a model to make predictions or perform a function of a Machin Learning (ML) algorithm. Test the application by using the chatbot application.

#### *User Test*

In this test the user, admin and owner will told to try the programme directly through teamviewer and

then a form will be created user questionnaire and admin / owner questionnaire form which will be sent to the user, admin and owner. I will be sent to users, admins and owners who who have tried the programme so that they can get their opinions about the programme that has been made (Dinata et al., 2021).

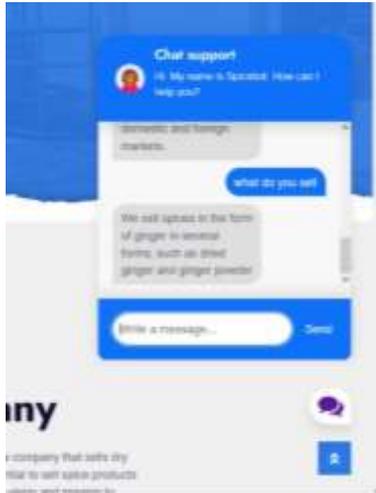


Figure 4. Test about product

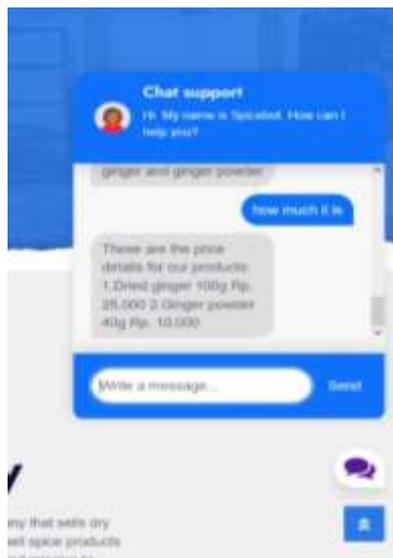


Figure 5. Test about pricing

## Conclusion

Chatbot application in online store application can already help users who are customers to carry out the purchase and payment process. The online store application is running well on the user, admin, owner side on the user side the process of the purchase and payment process has run according to with expectations and on the admin side and also owner, the sales process and reports have run according to expectations. The method used in answering questions from users is better to use other methods other methods

that are generative rather than retrieval so that the chatbot can answer questions that are not in the question bank. Adding recommendation features to online stores and create a chatbot that can send recommendations to customers.

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## Author Contributions

In this study, all researchers contributed actively with the tasks that were carried out together.

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## Conflicts of Interest

In this research, there is no tug of interest and or hidden interests among the researchers.

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