Application of Chatbot Using Chatbotika to Use Promote Product Business on the website of PT Services and Tourism West Java (Perseroda)

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Abstract

One role important in the digital business era in operate business in the field of services and tourism in need interaction with customer is chatbots. Chatbot b isa said one key confidential in support digital marketing and improve customer experience. Customer experience is supporter most important in a business process. With existence customer experience in chatbot sales becomes more practical without need throw away time and resources power, because chatbot provide 24 hour service and chat can customized based on segmentation and scale the customer. Chatbots are also capable scan needed information and automate response with fast and precise. Technology chatbot built use chatbot. Chatbotika is designed chatbot with technology Artificial Intelligence (AI) capable of imitate conversation human and role as digital assistant. After chatbot succeed integrated with Website Company, next is with do a test conversation to chatbot based on intents that have been made. Test results the showing that chatbot capable for give response relevant answer based on based on question asked customer. From the range score 0 to 1 intent product tested get score 0.83, which proves that intent work with good.

I. Introduction

Chatbotika is an intelligent program designed with technology Artificial Intelligence (AI) so that capable imitate conversation human (Admin, 2019). Role as capable digital assistant understand, process, and give relevant answer from request user. Therefore , this program have the designation "bot ", which is online robots as terms in general . Chatbots in general repay question or message use English or Languages other. We should no left behind in developing an Indonesian chatbot now start dominate Indonesian digital realm.

Artificial Intelligence (AI) in intelligent programs this adopt learning machines and Natural Language Processing (NLP) or processing language experience in language possible local with easy serve many visitors and increase service on time simultaneously (Admin, 2019). Smart program this is also capable answer question with adapt the language spoken by the visitor with habit as well as background behind each user. For example, if user is generation millennials, then chatbot will respond and customize conversation with language millennials they are use in life daily so that effective cool and fun.

Limitations man in handle many visitors in the same time , can resolved with presence chatbots. With chatbot perpetrator or owner business could see all conversation from many visitors and handle conversation the in short time without experience error whatever. Other benefits of existence chatbot is ability increase the number of people who use it. Imagine if somebody do conversation normal with other people, atmosphere heart or mood possibility will Becomes influence conversation moment repay message. This thing could minimized with help chatbots.

Chatbot this made with adopt AI, inside there is a number of technology, including machine learning used for teach, analyze and generalize various language (Admin, 2019). According to Pramusinto (2020) the power of technology including digitalization and automation continues to grow and change the pattern of production, distribution, and consumption. As with other areas of life, technology is used to make changes, so also with the legal system as technology in making changes (Hartanto, 2020). Meanwhile, the use of information technology is the benefit expected by users of information systems in carrying out their duties where the measurement is based on the intensity of utilization, the frequency of use and the number of applications or software used (Marlizar, 2021). While NLP has ability for understand and learn language man before give response or answer consistent message as well as relevant with language what visitors (Admin, 2019) say. In NLP itself there is pattern matching , decision tree-based and contextual (Admin, 2019).

With existence chatbotika this in the future PT Jaswita West Java capable for promote product business to customer digitally and build engagement with customer Becomes more good and effective. According to Priansa in Nusjirwan (2020) "Implementation of communication activities to customers within the company is carried out formally, however, currently there are also companies that practice their communication activities to consumers in an informed manner so that they can explore in-depth information from customers". Regarding the background, this research considers the customer value as an important element for an industry, both in service and manufacture. Moreover, the maximum customer value can be made only if positive influence of marketing and individual environment association does exist (Kusumadewi, 2019). The quality of products that are in great demand by consumers can be seen from several factors including packaging, price, quality, and benefits obtained by consumers (Romdonny, 2019).

II. Review of Literature

2.1 Chatbot

Chatbot is something designed dialogue system with process sentence based on keywords (keywords) or phrase for get desired information its users (ZN Baiti, 2013). Market advisory intelligence (Mordor Intelligence) companies do research that in 2017 the chatbot market was worth US $864.9 and it is projected that by 2023 it will reached US$ 3,146.4 Million, during the period 2018 to 2023 grows around 24.1% (A. Aryanto, 2019). The digital evolution of utilization chatbot this increase because a lot benefits offered as well as could increase satisfaction visitors who use it and also the number request will a capable chatbot imitate conversation humans and facilitate business processes in a company too increase (A. Aryanto, 2019). A number of company chatbot such as Kata.ai, EVA, Botika and so on join share in dominate realm chatbot domestically . Writer here use product chatbotika from Botika , because chatbot the have omnichannel easy dashboard perpetrator business in handle its customers and have trusted by various clients in Indonesia.

2.2 Botika

PT Botika Indonesian Technology (Botika) is a company from Yogyakarta who dwells with technology intelligence capable artificial do learning machines (machine learning) and processing language natural (natural language processing (nlp)) above language local (A Biotika, 2022). one product from Botika is Chatbotika , where chatbotika make it easier for perpetrators business for serve customers and reduce cost service support (customer support) and at the same time increase quality service   (A Biotika, 2022). Chatbotika this later will applied in promote product business and as chatbot service support (customer support) on the PT Jaswita website West Java . Chatbotika until moment this has handle 14 clients from various companies (A Biotika, 2022), including :

1. Maya: XL Axiata Virtual Assistant
2. Mizoo : Chatbot for Information Events Brand Mizone isotonic
3. Astrid: moment this change name become Viola, Chatbot for Help Service (helpdesk) PT Bank Bukopin Tbk
4. Ask Marlo: Chatbot for Innovation Project Social from UNAIDS
5. Tasya : Chatbot for Airport Information from Angkasa Pura II
6. Healthy AQUA: Virtual Assistant for Brand Aqua
7. Mas DAB: Chatbot for Social Commerce from DAGADU Yogyakarta
8. My Protection: Chatbot for Insurance
9. Chatbot for Company: BOT Source Power People and Procurement for Sampoerna Vendors
10. Lili Combiphar : Chatbot for Customer Combiphar
11. First Media Billing: Chatbot for First Media Bill
12. Citos Travel Service: Chatbot for B2B Travel
13. Love Bonito Chatbot: Chatbot for customer service
14. Sealand Chatbot: Chatbot for seaport.

2.3 PT Jaswita West Java

PT Jaswita West Java is a Regional Owned Enterprise (BUMD) Province West Java which was founded based on deed establishment approved company in front of Notary Public Ivone Nurul Fuadah SH. M.Kn. November 6, 2017 (DP W, 2018). Based on deed establishment company , Regional Companies (PD) Services and Tourism province West Java is changing form become PT Services and Tourism West Java (Perseroda) or could called with " Jaswita " West Java " (DP W, 2018).

Jaswita West Java now this has transform Becomes company attending professionals for serve public West Java , Indonesia even foreign and present with various service best in 4 fields business (DP W, 2018), including :
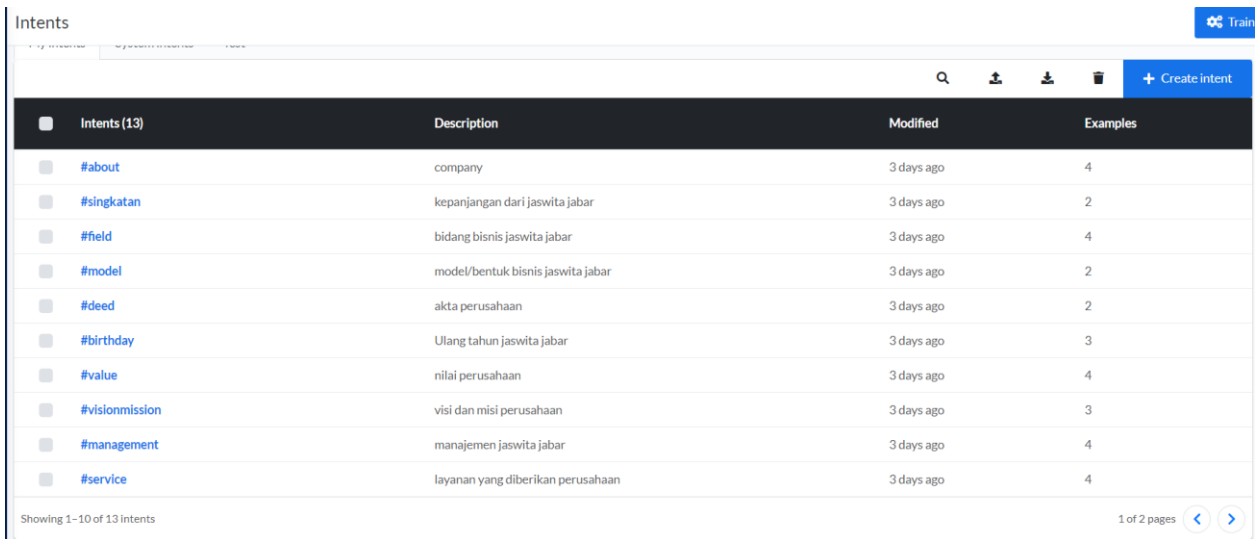
1. Business Hospitality and Mall
2. Business Property
3. Business Automotive and Repair
4. Service Business

In operate business , PT Jaswita West Java serve two form or business model namely : serving consumer by directly (either personal or corporate) and serve work same with partner in build something project (DP W, 2018).

III. Research Methods

3.1 Data Collection

Data used as ingredients possible question will asked by visitors got from PT Jaswita *website* West Java. Data from *website* the will recorded and then will used as training data or *training data* for *chatbot* , so later if visitors ask question about information company , then *chatbot* will answer question the in accordance with intent and purpose . In Figure 1 can seen the *intents* used for answer question visitors. In column first is category *intent* , column second is description *intent* and on column final is examples question , if listed two means there is two example question.

Intents (13)	Description	Modified	Examples
#about	company	3 days ago	4
#singkatan	kepanjangan dari jaswita jabar	3 days ago	2
#field	bidang bisnis jaswita jabar	3 days ago	4
#model	model/bentuk bisnis jaswita jabar	3 days ago	2
#deed	akta perusahaan	3 days ago	2
#birthday	Ulang tahun jaswita jabar	3 days ago	3
#value	nilai perusahaan	3 days ago	4
#visionmission	visi dan misi perusahaan	3 days ago	3
#management	manajemen jaswita jabar	3 days ago	4
#service	layanan yang diberikan perusahaan	3 days ago	4

Showing 1–10 of 13 intents   1 of 2 pages

Figure 1. *Intents Chatbot*

3.2 Workflow Chart *Chatbot*

Chatbot work in accordance with the instructions that have been given, instructions the made in something plot work where plot work the will applied for *chatbot rules,* so *chatbot* could integrated to in *Website Company*.
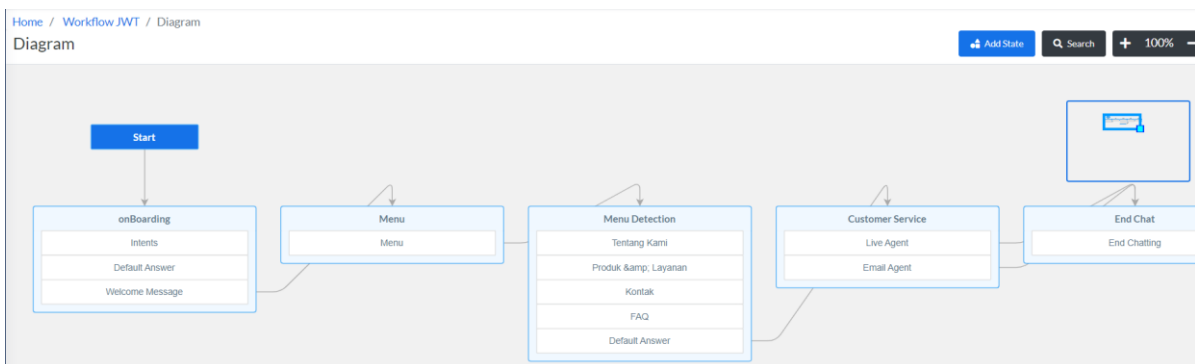

Figure 2. *Chatbot Workflow Diagram*

By whole plot work *chatbot* this could our see in Figure 2 which will explained step by step, including:

- *Start:* visitors *website* company currently start conversation through *chatbot*
- *onBoarding* : features *chatbot* this will repay conversation beginning with three scenario . Scenario first conversation beginning visitors chatbot replied with answer

from *intents* that have been created, scenario second if no can answer question visitors so replied *chatbot* with *default answer*, and scenario third *chatbot* will repay question visitors with showing *menu carousel. Carousel* the containing three menus , namely About Us, Products & Services, and Contact. Each of these menus could chosen visitors for showing every the content .

- *Customer Service* (CS): *chatbot* will display second knob *customer support* that is *live agent* or *e-mail* to *agent*. The feature will shown if the chatbot doesn't could answer question from visitors after the three menus displayed.
- *End Chat* : after service from CS then *chatbot* will end conversation with visitors.

IV. Discussion

4.1 *Chatbot Integration* with *Website*

Workflow or installed workflow in *chatbot rules* will integrated with *website* company, integration that is with pair *webchat platform* botics https://chat.botika.online/WAASuoL to in company *website*. Basically webchat the still appear and run on *the server* botics, need for integrated with PT Jaswita *website* West Java using *WordPress* as *Content Management System* (CMS). Steps for integrate it with copy lines of *script* that can be seen in Figure 3

```
<script src="https://chat.botika.online/client/assets/js/botika.widget.js"></script>
<script>
        window.BotikaChat.init({
                client: "WAASuoL",
        });
</script>
```

Figure 3. *Chatbot Script*

After copy *script* above, enter into CMS *Wordpress,* select the ' *Appearance* ' menu, then select the ' *Theme File Editor'* submenu. Choose one *script* (. php), in Thing this Writer choose *script footer.php*, paste copy the *script* in Figure 3 before the </ *body* > tag, last then Press ' *Update Files'* button for keep configuration *files*. Steps the could seen in Figure 4.
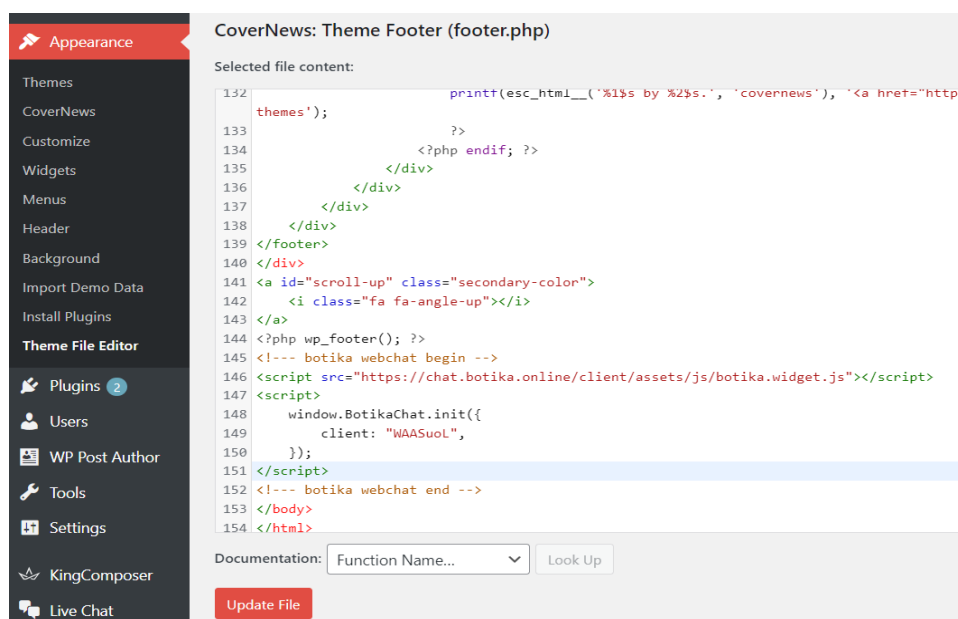

Figure 4. *Chatbot Script Integration into in CMS Wordpress*

Wait until the *file update* process done , then test did the chatbot work integrated with *website* that is with visit *website* and view is appear appearance *chatbot* as in Figure 5 which identifies that *chatbot* integrated with good.
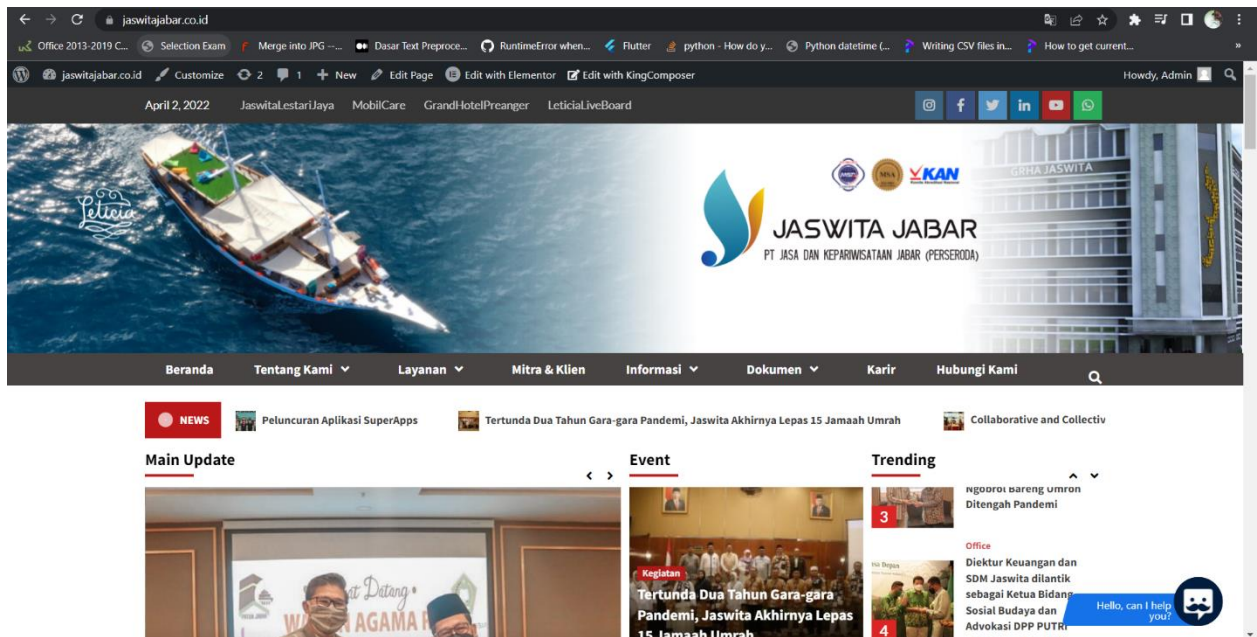

Figure 1. *The Old Look of the Website that has been Chatbot Installed*

4.2 Conversation Visitors with *Chatbot*

Following this a number of example replied conversation chatbot based on plot work *chatbot* in Figure 2, including:

a. *Chatbot Intents*

Conversation first, *chatbot* repay in accordance with answer *the intent,* for example visitor's type in ' product jaswita jabar ' then *chatbot* will repay in accordance with relevant information contained in *intents.* After that when visitors choose one product business then the chatbot will connect to *whatsapp business* managed by third party *sales/marketing* can seen in Figure 6.
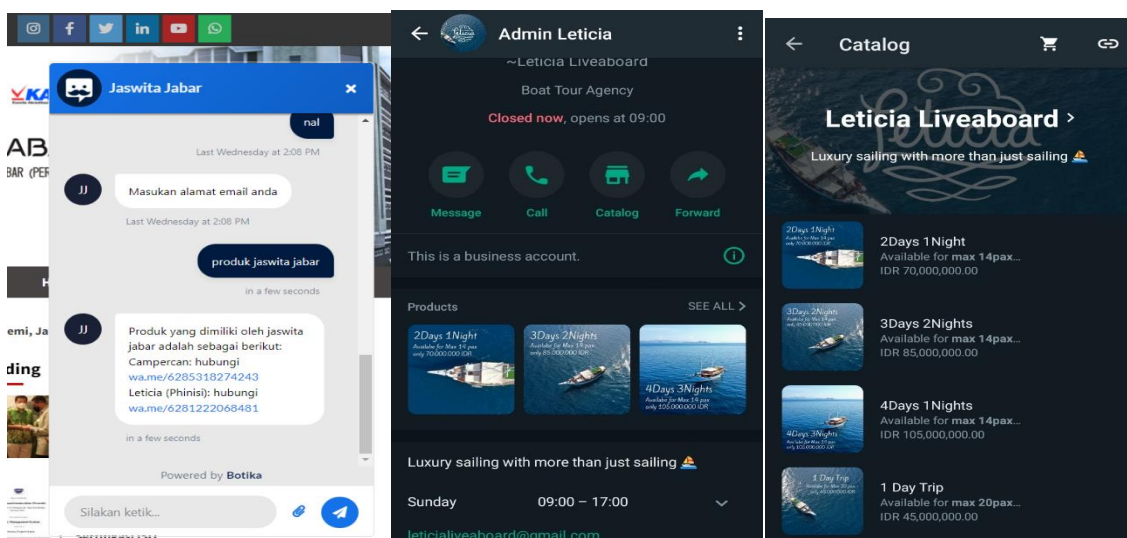

Figure 6. *Chatbot & Direct WA Business Intent*

b. *Chatbot Menu*

Conversation Next up, *chatbot* will showing where the three menus are? Visitors could direct cursor *pointer* to right or could choose with push ' Select ' button on either one one menu or typing menu titles, for example ' Products and Services ' can be seen in Figure 7.
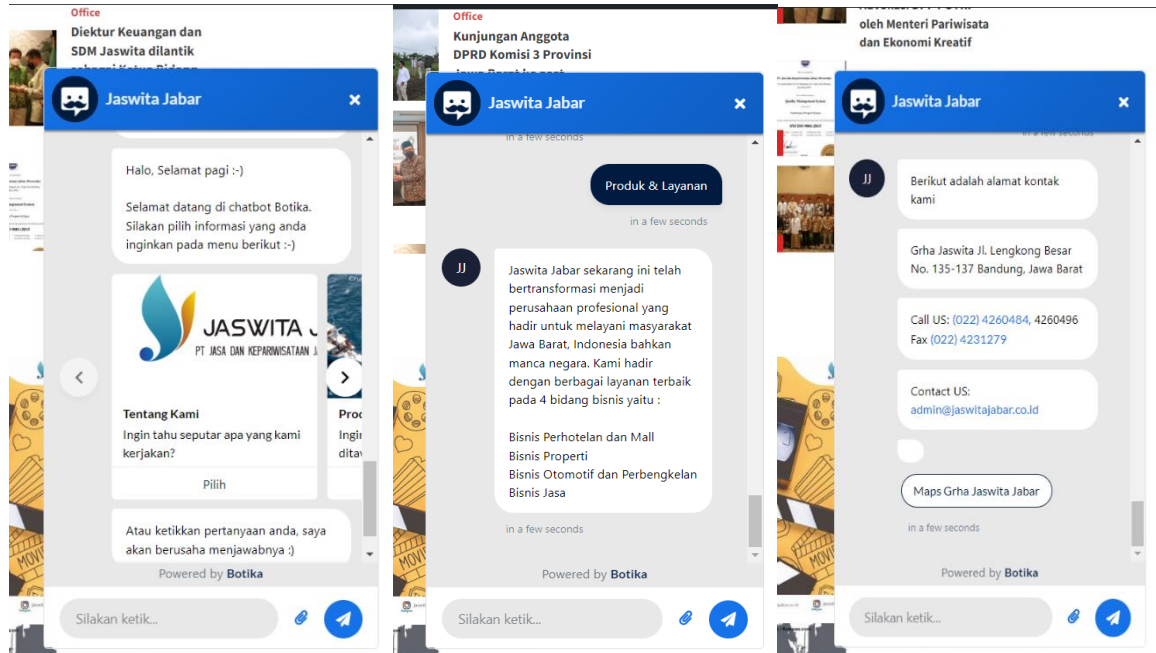

Figure 7. *Carousel Menu & Selecting Menu*

c. *Customer Service Chatbot*

Conversation next, if *chatbot* no could repay questions asked by visitors after *carousel menu* is displayed, then the chatbot will direct visitors going to to *Customer Service* (CS). There are two CS service provided by *chatbot* i.e. ' *Email* to *agents'* or ' Contact *Live Agent'*.

1. *Email* **to** *Agent*

Services provided by *chatbot* this will send *log* details conversation that doesn't can answered by *chatbot* to *e-mail sales / marketing*. Instructions is after visitors choose ' *Email* button to *Agent'* , then *chatbot* will direct visitors for typing address *valid email* could seen in Figure 8. Finally will there is *e-mail* enter to *email sales* , then *sales* could answer question the then carry on post answer to address e - *mail* listed in subject his e- *mail* could seen in Figure 9.
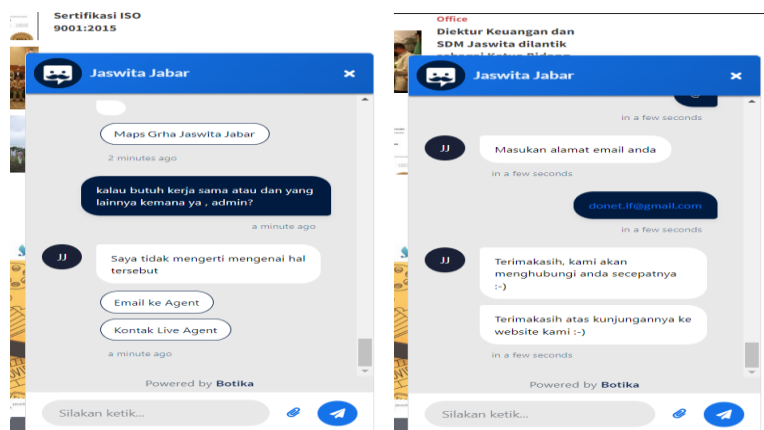

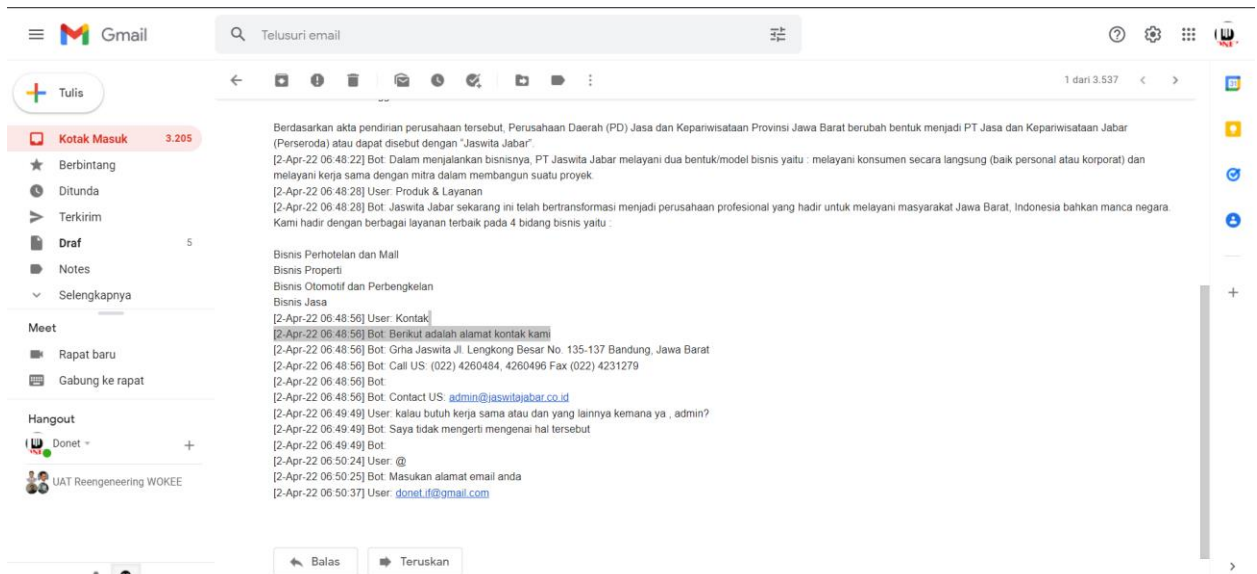***Figure 2.*** *Selecting Email to Agent & Entering User Email*

Figure 3 *Conversation Log Details*

2. Live Agent

If visitors choose the ' *Live Agent* ' button then the chatbot will direct visitors for waiting available *agents* and when there is *agent* the *online* , *agent* could live answer question visitors could seen in Figure 10.
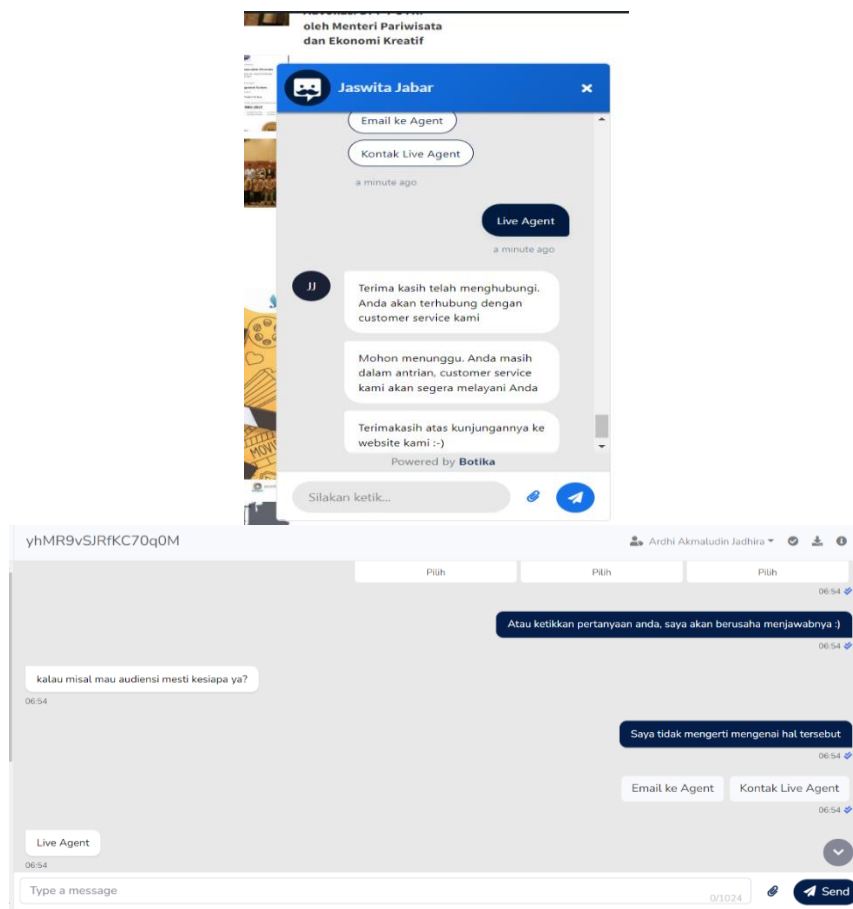

Figure 4. *Choose Live Agent Contacts & Agent Dashboard View*

After *agent* the give answer on submitted statement so will come on stage reply *agent* from appearance *chatbot* visitors when not there is again question , *agent* the required for close ticket , so for conversation next will replied by *chatbot*.
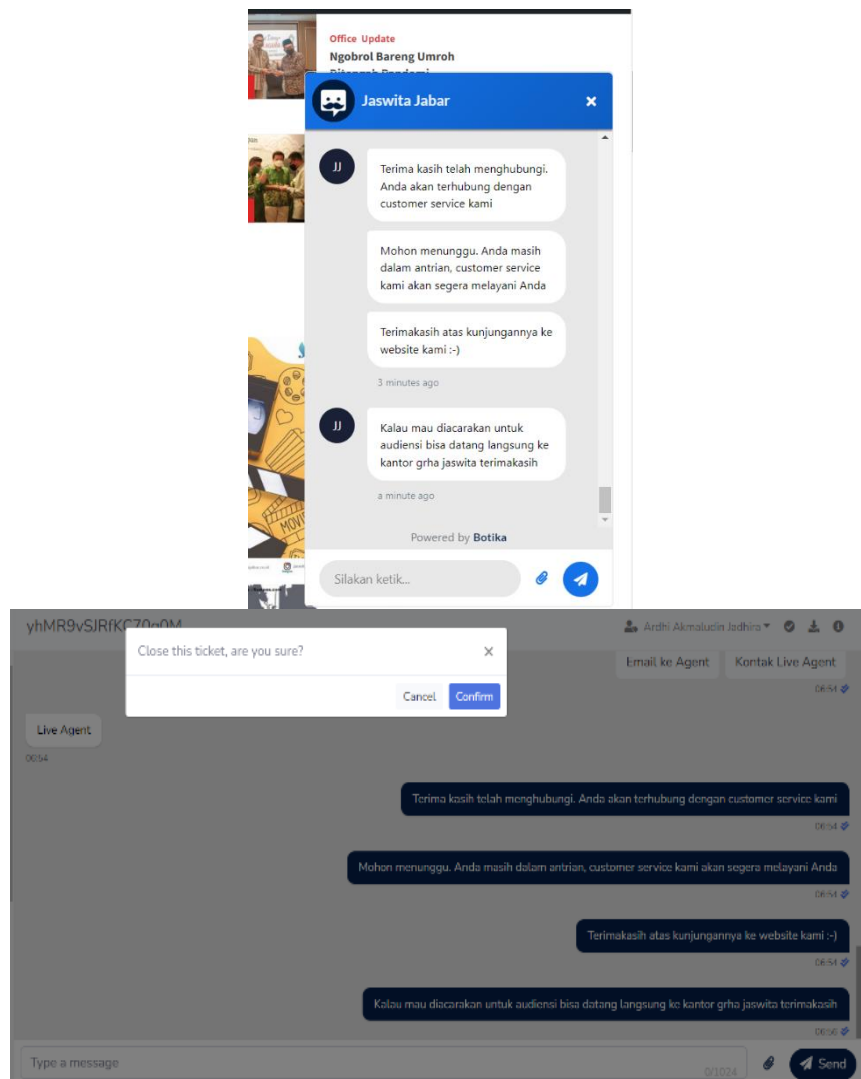

Figure 5. *Incoming Conversation from Agent to Visitors & Tickets Closed*

4.3 Testing *Chatbot Intent*

Range *score* testing *intent* between zero (0) to one (1), when *score* approach number zero so could said bad intent system , whereas when *score* the more approach number one could said system it is very good . The example in Figure 12 can be seen that *score* for *intent* *product* get where is the number 0.83? Show *intent* the already good and can said the answer given by any *chatbot* already relevant could seen in Figure 6.
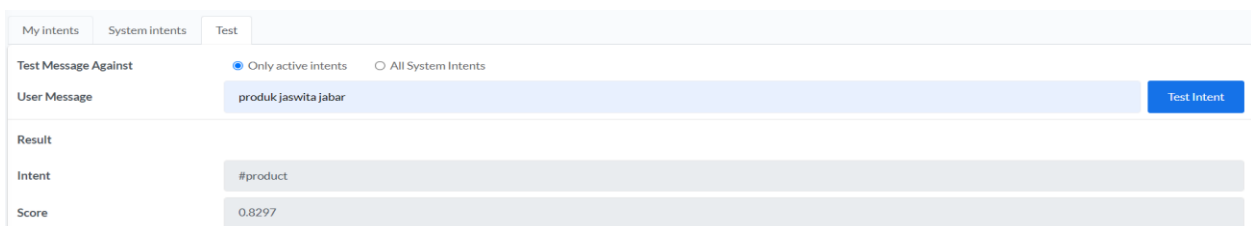

Figure 6 *Score Intent Product*

V. Conclusion

5.1 Conclusion

In practice, chatbot this have a number of profit for PT Jaswita West Java including:

1. Convenience in use as well as Settings its chatbot. Chatbot this simple and flexible, user could with easy do chatbot setup in accordance with his needs and wants. User in Thing this is Markom & Technology Division Information in company PT Jaswita West Java.
2. Segmentation audience marketing and building engagement Becomes more effective. NLP technology can help adapt self with characteristics customers served, so that conversation among customer becomes more familiar and every perpetrator business certain have heterogeneous customers, start from generation young until old. Chatbot this by automatic could serve conversation the in accordance with segment his age.
3. Save time as well as no need big funds for its manufacture. Chatbot this could save time for visitors in need information by fast. Chatbot this will also give relevant information as response on request question visitors. And the perpetrator business can save cost endorsement customer or customer support.
4. Reduce error conversation caused by human error. Man Possible have potency could make error, ok that error light nor weight , with help chatbot this could work in accordance with given instructions , so that could minimize potency error .
5. Give satisfaction customers and improve total sales. If the question customer no can answered with fast, sure usually they will be very upset. With chatbot whenever and wherever question proposed user capable answered by fast.

5.2 Suggestions

As for suggestions that can be added as well as applied for chatbot this future is as following:

1. Develop plot work chatbot by wide, isn't it? Only questions about Information Company but could accommodate outside question that, so that could minimize mismatch answer from question asked visitors by complex.
2. Add whole product PT Jaswita's business West Java to in chatbots. And chatbot could simulate as if visitors want to rent one product business company.
3. If in the future chatbot this used , hope users (Div. Markom & IT) can do recap questions what only often submitted visitors and questions that are not could answered chatbot by relevant .

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