UTAS Chatbot

Dhiya AlSaqri[1] , Sumaya Salim Al Moqbali[1], Sara Salim AL Mamari[1] *

1. *Information Technology Department, University of Technology and Applied Sciences, Suhar-Sultanate of Oman*

.

Corresponding Author *

Abstract:

AI is the foundation of all computers learning and the way that complex decision making will proceed in the future. The volume of data produced by machines and people combined today surpasses what humans can process, comprehend, and use to make sophisticated decisions. In cases where artificial intelligence is applied to chatbots, a chatbot is, in essence, a computer program that mimics and interprets spoken or written human conversation, enabling users to engage with digital devices in the same way they would with a real person. A chatbot can be as basic as a one-line program that responds to a simple question, or it can be as sophisticated as a digital assistant that learns and adapts over time as it gathers and analyzes data to provide ever-higher levels of personalization. Artificial Intelligence Chatbots (are the latest development and are still progressing and evolving. The chatbot is specifically targeted the students at The University of Technology and Applied Sciences. This is a link created using artificial intelligence technology and contains information related to students, such as: Score inquiry, subject inquiry, teacher inquiry. For every subject, the technology can reduce congestion in admissions and registrar offices.

This chatbot reduces the crowding rate at transcription and registration offices. For example, Foundation students are the students who need more understanding about the university system and the group most in need of increased awareness of the university's rules, which reduces this chatbot's number of questions and inquiries

Keywords: Artificial intelligence, programming skills, computer science, chatbots, AI, technology, modern technologies**.**

Email Addresses: dhiya.alsaqri@utas.edu.om (Dhiya), s2018293090@utas.edu.om (Sumaya), s2018293153@utas.edu.om (Sara).

1. INTRODUCTION

Artificial Intelligence Chatbots (are the latest development and are still progressing and evolving. The chatbot is specifically targeted the students at The University of Technology and Applied Sciences. This is a link created using artificial intelligence technology and contains information related to students, such as: Score inquiry, subject inquiry, teacher inquiry. For every subject, the technology can reduce congestion in admissions and registrar offices.

At registration and transcription offices, this chatbot lessens crowding. This chatbot receives fewer questions and inquiries from Foundation students, for instance, who are the students who require

greater comprehension of the university system and who are the group most in need of increased awareness of the university's rules.

2. RESEARCH OBJECTIVES

The purpose of the feasibility study is to examine the different facets of the chatbot and determine whether it can be put into use. Technical, operational, economic, and legal feasibility are all examined in the feasibility study.
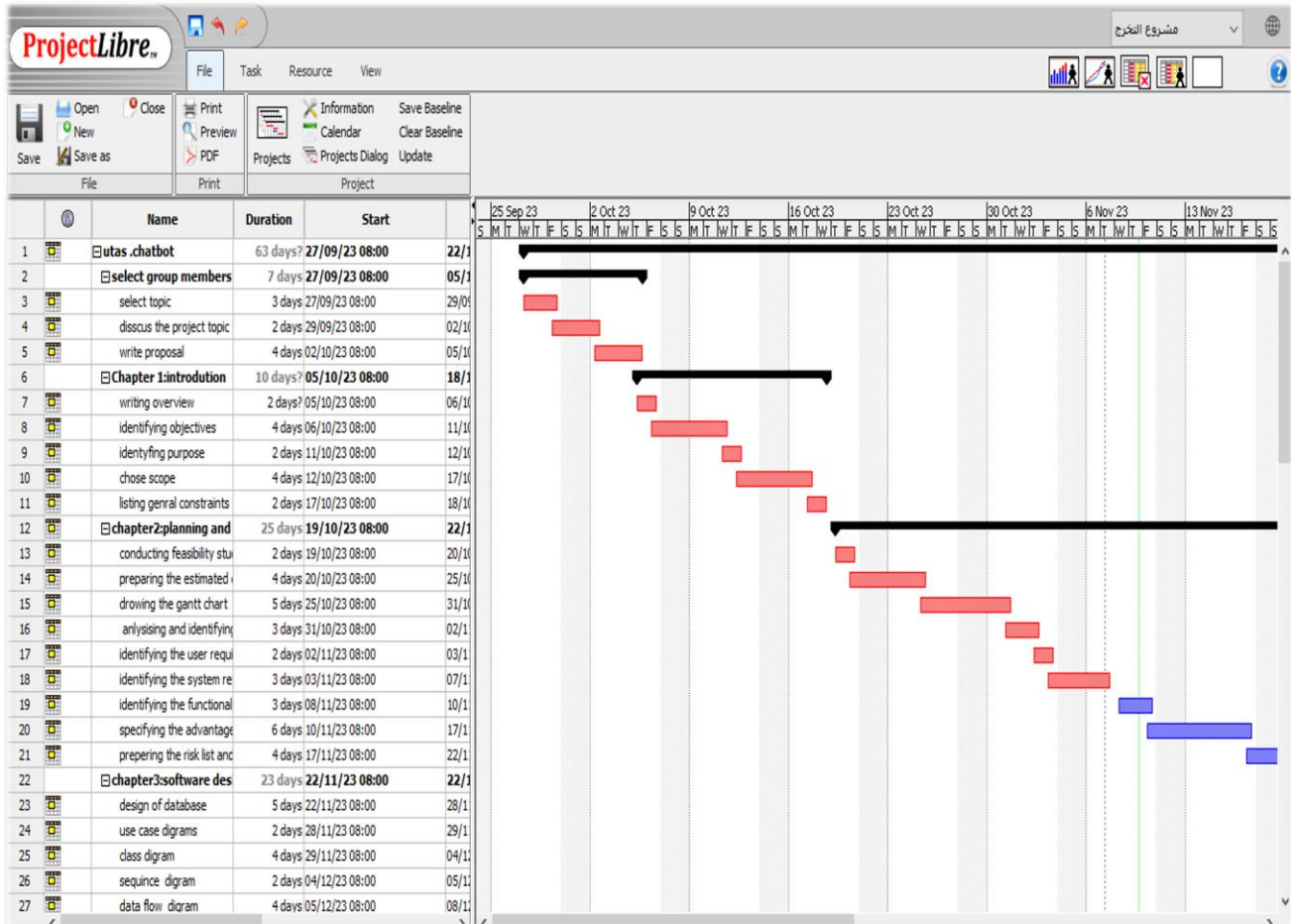
OBJECTIVES

- To enhance communication between the student and the university.
- To make it easy for the student to access information easily.
- To facilitate administrative processes such as inquiring about university-related topics.

3. SYSTEM PROTOTYPE & DESCRIPTION

The chatbot contains a large number of data pieces and all the information that the student may need, for example: the GPA required so that the student can obtain a diploma and bachelor's degree, also the subjects that the student should study according to the plan and other information. There is also simple information about housing adjacent to the university for female and male students. The student can ask his questions at any time, and the information entered the chatbot is unlimited and subject to change in the future

3.1. SYSTEM ARCHITECTURE AND NETWORK

One of the most crucial phases in the system development life cycle is project planning. At this point, a number of studies must be carried out and a solid plan must be created for the team members to adhere to. The figure shows the project plan

		Name	Duration	Start	
1		⊟utas .chatbot	63 days?	27/09/23 08:00	22/1
2		⊟select group members	7 days	27/09/23 08:00	05/1
3		select topic	3 days	27/09/23 08:00	29/09
4		disscus the project topic	2 days	29/09/23 08:00	02/1(
5		write proposal	4 days	02/10/23 08:00	05/1(
6		⊟Chapter 1:introdution	10 days?	05/10/23 08:00	18/1
7		writing overview	2 days?	05/10/23 08:00	06/1(
8		identifying objectives	4 days	06/10/23 08:00	11/1(
9		identyfing purpose	2 days	11/10/23 08:00	12/1(
10		chose scope	4 days	12/10/23 08:00	17/1(
11		listing genral constraints	2 days	17/10/23 08:00	18/1(
12		⊟chapter2:planning and	25 days	19/10/23 08:00	22/1
13		conducting feasibility stu	2 days	19/10/23 08:00	20/1(
14		preparing the estimated (	4 days	20/10/23 08:00	25/1(
15		drowing the gantt chart	5 days	25/10/23 08:00	31/1(
16		anlysising and identifying	3 days	31/10/23 08:00	02/1
17		identifying the user requi	2 days	02/11/23 08:00	03/1
18		identifying the system re	3 days	03/11/23 08:00	07/1
19		identifying the functional	3 days	08/11/23 08:00	10/1
20		specifying the advantage	6 days	10/11/23 08:00	17/1
21		prepering the risk list and	4 days	17/11/23 08:00	22/1
22		⊟chapter3:software des	23 days	22/11/23 08:00	22/1
23		design of database	5 days	22/11/23 08:00	28/1
24		use case digrams	2 days	28/11/23 08:00	29/1
25		class digram	4 days	29/11/23 08:00	04/1:
26		sequince digram	2 days	04/12/23 08:00	05/1:
27		data flow digram	4 days	05/12/23 08:00	08/1:

Artificial intelligence (AI) systems typically function by absorbing vast quantities of labeled training data, examining the data for correlations and patterns, and utilizing these patterns to forecast future states. In this way, an image recognition program can learn to recognize and characterize items in photographs by going through millions of examples, or a chatbot fed text examples can learn to create realistic conversations with people. Generative AI algorithms are developing quickly and can produce realistic text, graphics, music, and other media.

Programming for AI concentrates on cognitive abilities such as these.

Educating:

This area of AI programming is concerned with gathering data and formulating the rules necessary to transform it into useful knowledge. The rules, also referred to as algorithms, give computing devices detailed instructions on how to carry out a certain activity .

Thinking:

Selecting the appropriate algorithm to get the intended result is the main goal of this area of AI programming.

Self-improvement:

The goal of this AI programming feature is to continuously improve algorithms so they can deliver the most accurate results.

Originality:

This branch of AI creates new text, images, music, and ideas through the use of neural networks, rules-based systems, statistical techniques, and other AI tools.

3.2. SYSTEM APPLICATIONS AND SERVICES

The system provides patients who reside in the countries included in this treatment network with the following applications:

3.3. SYSTEM FUNCTIONALITY AND DATABASE SYSTEM REQUIREMENTS

It will take a full academic year; Computers are required to use the chatbot

Domain requirements

The ability to delete and add everything related to the university, the ability of a chatbot to answer questions.

Functional Requirements

The functional requirements explain how the chatbot can meet the needs of students and staff. The following are the functional requirements for the chatbot:

-The system must open a chat page for the user.

The system must provide all information about the university.

-The user must be able to enter any inquiry.

The system must answer the user's inquiry.

Non-Functional Requirements

There are several non-functional requirements for Utas Chatbot including the following:

Ease of use:

The chatbot interface is easy to use and able to accurately understand and interpret all inputs.

Reliability:

Reliability metrics that chatbot users can rely on to answer their questions will be checked regularly, and maintenance and support will be provided to resolve problems encountered

3.4. SYSTEM SECURITY FEATURES

When it comes to chatbot security, there are several things to consider. The following inquiries can be used to address these concerns in general:

In what setting is a chatbot constructed?

The chatbot is hosted where?

What security features does the technology that the chatbot is based on have? I'll respond to each of these queries individually.

4. DISCUSSION

There are many restrictions and challenges that may hinder us in the progress of this project. Below are the general limitations of our project. Lack of experience in creating a Chatbot. Learning new programming languages to apply them in creating a chatbot. We must collect sufficient information about everything related to the university, except for admission, registration, teachers, etc. The chatbot's work must be completed in a certain period of time (the academic year).

5. CONCLUSION

To sum up, chatbots are very effective technological advancements for universities. The chatbot answers questions and delivers information instantly to both staff members and students. Students and staff can also get help from the chat robot at any time, even outside of regular business hours, since it is available to them around-the-clock. The chatbot also helps the university's staff feel less fatigued at work and improves the effectiveness of administrative procedures. University chatbots have already demonstrated their ability to improve both students' and staff' overall experiences at universities by providing answers to a wide range of queries.

6. REFERENCES

[1] Dilmegani, C. (2023, October 12). How to build a chatbot: Components & architecture in 2023. Retrieved from AIMultiple:
https://research.aimultiple.com/chatbot-architecture/

[2] Leah. (2022, December 13). 5 ways to use a chatbot for university students. Retrieved from Userlike: https://www.userlike.com/en/blog/chatbot-for- university

[3] Mousumi. (2021, August 25). How universities are using chatbots to help improve student experience. Retrieved from Kommunicate:
https://www.kommunicate.io/blog/chatbots-in-universities/

[4] Shweta. (2022, August 21). What is A chatbot? Everything you need to know. Retrieved   from   Forbes:
https://www.forbes.com/advisor/business/software/what-is-a-chatbot/

[5] Donglok Kim, James E. Cabral Jr. and Yongmin Kim, "Networking Requirements and   the   role   of   multimedia   systems   in melemedicine", ImageComputingSystem laboratory, (www.fizzle.ee.washington.edu).