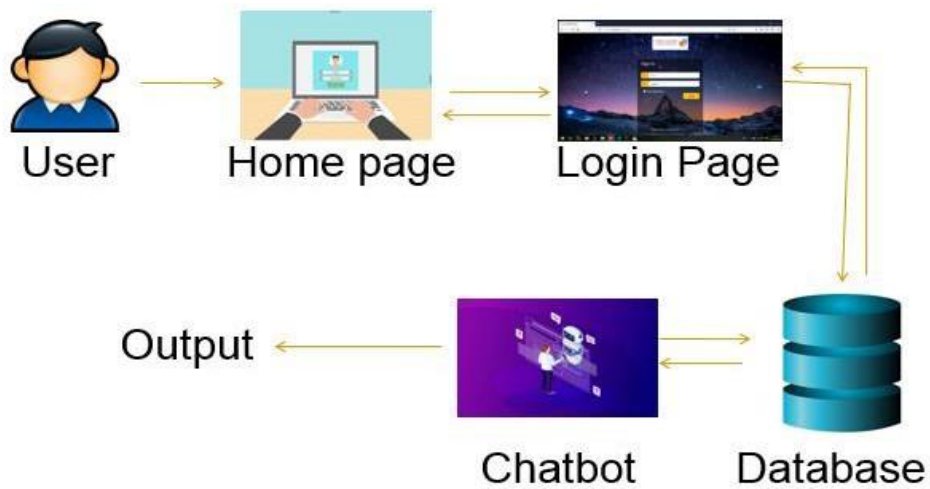


ABSTRACT

Chatbot is an automation system and different formats of chat bots are text based, graphical, web application, and voice based. Chatbots typically provide a text-based user interface, allowing the user to type commands and receive text as well as text to speech response. The functionality of a Chat bot works only on the existing commands. Chatbots usually remember previous commands in order to provide functionality. The term "ChatterBot" was originally coined by Michael Mauldin (creator of the first Verbot) in 1994 to describe these conversational programs. Chatbots are used in dialog systems for various purposes including customer service, request routing, or information gathering. While some chatbot applications use extensive word-classification processes, natural language processors, and sophisticated AI, others simply scan for general keywords and generate responses using common phrases obtained from an associated library or database. A chatbot is often described as one of the most advanced and promising expressions of interaction between humans and machines. However, from a technological point of view, a chatbot only represents the natural evolution of a Question Answering system leveraging Natural Language Processing (NLP). Formulating responses to questions in natural language is one of the most typical Examples of Natural Language Processing applied in various enterprises' end-use applications. This is the first task that a chatbot performs. It analyzes the user's request to identify the user intent and to extract relevant entities. The ability to identify the user's intent and extract data and relevant entities contained in the user's request is the first condition and the most relevant step at the core of a chatbot: If you are not able to correctly understand the user's request, you won't be able to provide the correct answer. Once the user's intent has been identified, the chatbot must provide the most appropriate response for the user's request. Chatbot applications streamline interactions between people and services, enhancing customer experience. At the same time, they offer companies new opportunities to improve the customers engagement process and operational efficiency by reducing the typical cost of customer service.

METHODOLOGY AND DESIGN OF THE PROJECT

The main aim is to reduce the manual work in generating the reports either student wise or batch wise based on the inbuilt queries which are embedded using Chabot and also to generating the comparative graphical chart reports. Proposed chat bot system will provide additional features like flexibility, and also friendly environment. The flexibility features are used to retrieve the information like related query suggestion, entire information display of a particular candidate and additional query submission to the admin, computed data display. Friendly environment is provided by an interface that is easy for user to enter the queries in natural language with out any particular format.



OBJECTIVES

Our objectives are :-

J.A.V.I.I.S. is a Chabot in educational domain.

The purpose is focused on the design of the specific architecture and model to manage communication and furnish the right answers to the students.

provide a chatbot that can make the communication easy.

This helps the students to have the right information from the trusted source.

This made administration of information easy.

not only help the administration but will also help students in communicating effectively.

always trying our best to improve the environment for students to help them in every way possible and our chatbot does that.

not only give right answers to questions, it will also help students understand the learning environment.

24/7 available to help students connect to GW's wireless network, register devices, and get assistance with other requests.

This chatbot is for students who are eager to get right answers to their questions.

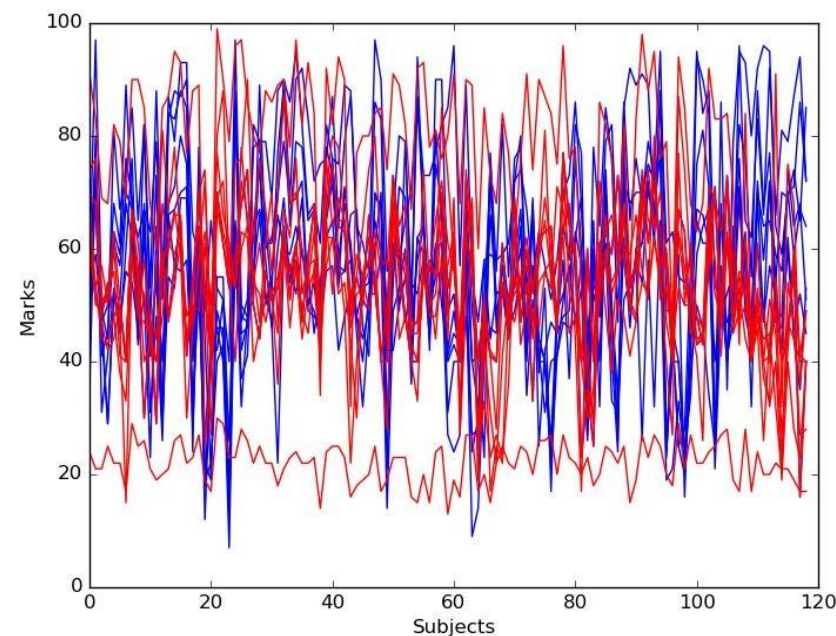
Chatbots are fully functioning, semi-autonomous systems that can assist customer service experiences and response time.

If the future demands advanced chatbots that do more than use scripted, single-turn exchanges, then their method of interface will also have to advance.

A voice interface can assist users with disabilities or those who are skeptical of technology, but it also requires another layer of NLP development.

While voice interface may be optional, chatbots have been in the enterprise long enough for developers and experts to begin identifying what elements of chatbots are mainstay requirements.

NLP development, human-like conversational flexibility and 24/7 service are crucial to maintaining chatbots' longevity in enterprise settings.



RESOURCES

Software Requirements:-

Python Artificial Intelligence Mark-up Language

Natural language processing tool kit

Python –flask

SQL alchemy

Hardware Requirements:-

Intel Core i3 processor

RAM: 4GB

Operating System: Windows 10

Hard Disk: 1TB



PROJECT DESCRIPTION

The main aim is to reduce the manual work in generating the reports either student wise or batch wise based on the inbuilt queries which are embedded using Chabot and also to generating the comparative graphical chart reports.

Proposed chat bot system will provide additional features like flexibility, and also friendly environment.

The flexibility features are used to retrieve the information like related query suggestion, entire information display of a particular candidate and additional query submission to the admin, computed data display.

Friendly environment is provided by an interface that is easy for user to enter the queries in natural language with out any particular format.

UI Updation – We introduced a theme system to make the interface more user friendly. It has Violet and Brown Themes. We have made our software more easy, better and efficient and have added creative automation to the interface.

J.A.V.I.I.S. OFFICE – We have created a space for students to write the data and save it with any extension (.txt, .xls, .ods, .zip etc). It is open-source and doesn't require license to work on. Its very user-convenient and very easy to learn and work on. You can also upload files into it.

Feedback – We have introduced a feedback system to improve our software. Students can give feedbacks to admins and we can see your views.

J.A.V.I.I.S. Website for Students – It has Speech Trainer and Graphs/Charts for students to practice and learn.

CONCLUSIONS

All this difficulties can be minimised, computation time and effort are reduced by automating the entire process by using student informative Chatbot J.A.V.I.I.S.

24/7 available to help students connect to GW's wireless network, register devices, and get assistance with other requests.

The purpose is focused on the design of the specific architecture and model to manage communication and furnish the right answers to the students.

provide a chatbot that can make the communication easy.

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REFERENCES

- Farhan, M., et al.:** Automated reply to students' queries in e-learning environment using Web-BOT. In: Eleventh Mexican International Conference on Artificial Intelligence: Special Session - Revised Paper (2012)
- Yan, M., Castro, P., Cheng, P., Ishakian, V.** Building a Chabot with server less computing. In: Proceeding of the 1st International Workshop on Mashups of Things and APIs(2016). Article no.5.
- Kaisheng Yao, Geoffrey Zweig, Baolin Peng,** "Attention with Intention for a Neural Network Conversation Model", pp.1183-1193, NIPS Workshop on Machine Learning for spoken language understanding in 2015.
- Abdul-Kader, SA and Woods, JC** (2015) 'Survey on Chatbot Design Techniques in Speech Conversation Systems.' International Journal of Advanced Computer Science and Applications, 6 (7). ISSN 2156-5570.
- Alepis, E., & Virvou, M.** (2011). Automatic generation of emotions in tutoring agents for affective e-learning in medical education. Expert Systems with Applications, 38(8): 9840–9847.
- Ashok, G., Brian, C., Mithun, K., Shanu, S., Abhinaya, S., & Bryan, W.** (2015). Using Watson for Enhancing Human-Computer Co-Creativity. AAAI Symposium: 22–29.
- Ayedoun, E., Hayashi, Y., & Seta, K.** (2015). A Conversational Agent to Encourage Willingness to Communicate in the Context of English as a Foreign Language. Procedia Computer Science, 60(1): 1433–1442.
- Colace, F., De Santo, M., Lombardi, M., Pascale, L., Pietrosanto, A.** (2018). Chatbot for E-Learning: A Cases Study. International Journal of Mechanical Engineering and Robotics Research Vol. 7, No. 5, September.

ACKNOWLEDGEMENT

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PROF. PRAVEEN BHANODIA
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PROF. SHIV SHANKAR
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