RESULT PAPER:
Chatbot Based Training and Placement Management

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Abstract— Training and Placement in colleges carry out various operations like proper trainingand skill development program for students and other campus recruitment related activities,which can be carried out by manually or software but we implemented a smart Chatbot based solution to the whole management scenario where machine to human interaction takes place.

Keywords — Artificial Intelligence, Natural Language Processing, Chatbot, Artificial Intelligence Markup Language

INTRODUCTION

Training and Placement Cell is to guide students to choose right career and to give knowledge, skill, and aptitude and meet the man power requirements of the industry, to assist students to develop/clarify their academic and career interests, and their short and long-term goals through individual counseling and group sessions maintaining and regularly updating the database of students, maintaining database of companies and establishing strategic links for campus recruitments, gathering information about job fairs and all relevant recruitment advertisements, coordinating with companies to learn about their requirements and recruitment procedures, identifying the needs and expectations of the companies to assist them in recruiting most suitable candidates, organizing pre-placement training/workshops/seminars for students, arranging periodic meetings with Human Resources Department of companies and Training and Placement Officer's to promote recruitments, assist students for industrial training at the end of the fourth and sixth semester, provide resources and activities to facilitate the career planning process, act as a link between students, alumni, and the employment community, to assist students in obtaining placement in reputed companies. Keeping in view the industry requirements, the training curriculum is designed for preparing the students for entry-level Graduate Engineer Trainees, following are the key aspects of training

- Personality Development.
- Communication Skills & Vocabulary.
- Resume Preparation & Email Writing.
- Group Discussion.
- Interview Skills.
- Aptitude Training & Practice Tests.
- Foreign Languages such as Japanese & German.

In this application we are using natural language processing to create a chatbot to navigate through all the modules of the system, carrying out tests and skill development activities to monitor student improvement and skills .This application also provides various recommendation based on user need and keep notified about all the training and placement related news and information.

RELATED WORKS

- Chatbot in various online service Providers(Flipkart,Myntra)
- Chatbot in University Websites
- Chatbot in Information display

PROPOSED SYSYTEM

The Proposed System application is developed as a tool to implement automated solution to the training and placement management procedure by providing artificial intelligence based approach, we provide with a system where human

computer interaction takes place which provide smart solution to the existing system which is traditionally carried out with a manual approach, This system also consist of various modules and additional features which generate more efficient and sophisticated outcome from the system ,by adding various Artificial Intillegence based system components such as chatbot for interaction with the System and navigating through the modules, recommendation system to provide efficient recommended outcome based on various conditions taking into consideration user's motive and needs.

- This system provide full solution to the manually done procedure of Training and Placement.
- A chatbot to provide full assistance and navigate through all the modules of the system.
- Improvises and moniter student skill set by taking various computer based exams
- provide recommended candidate's list according to their skillset.
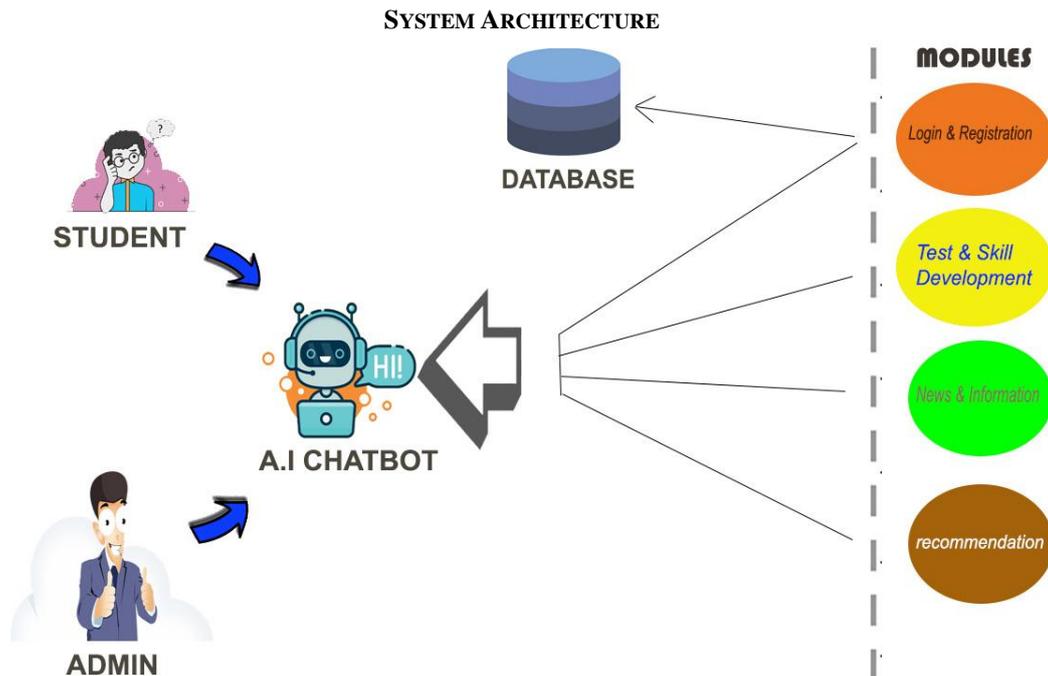- Display various news and relevant information

SYSTEM ARCHITECTURE

Fig. 1: System details of Admin and Student carrying out
Training and Placement procedure through proposed system
(System Architecture)

IMPLEMENTATION DETAILS

General structure of the system:

The system is composed of three-layered structures:

1.   A database for data storage, mongoDB
2.   A web based application hosted on cloud server Heroku
3.   Chatbot.

As database, MongoDB is used since; MongoDB is a cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with schemata. MongoDB is developed by MongoDB Inc. and licensed under the Server Side Public License (SSPL). To develop this system, a server based and fast node.js,React.js programming language is preferred. For the developed system, Heroku is used as a cloud server which is a strong, Heroku is a cloud platform as a service (PaaS) supporting several programming languages.

SNAPSHOTS
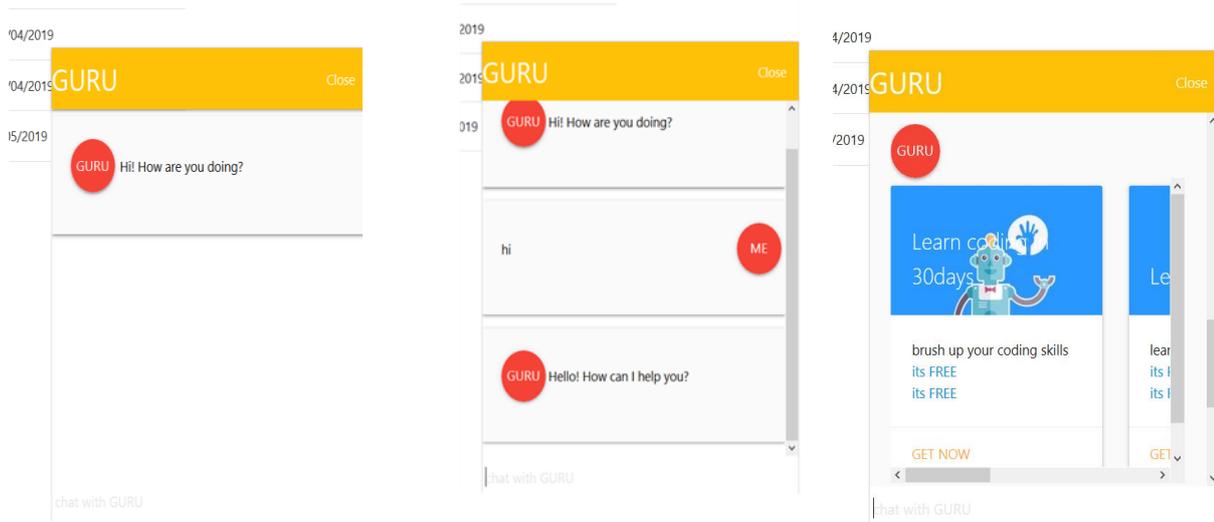
RESULTS:

1.   **Comparision**

| Sr No.	Operations	Manually done	Software based approach	Chatbot implemented system
1	Communications	For a limited period of time	For a limited period of time	24x7 communication
2	Awareness	Not Efficient	Not Efficient	Real time efficient
3	Information	Not properly circulated	Not efficiently circulated	Real time information feeding
4	Guidance	Average guidance	Average guidance	Efficient guidance procedure carried out

2.   Chatbot VS App:
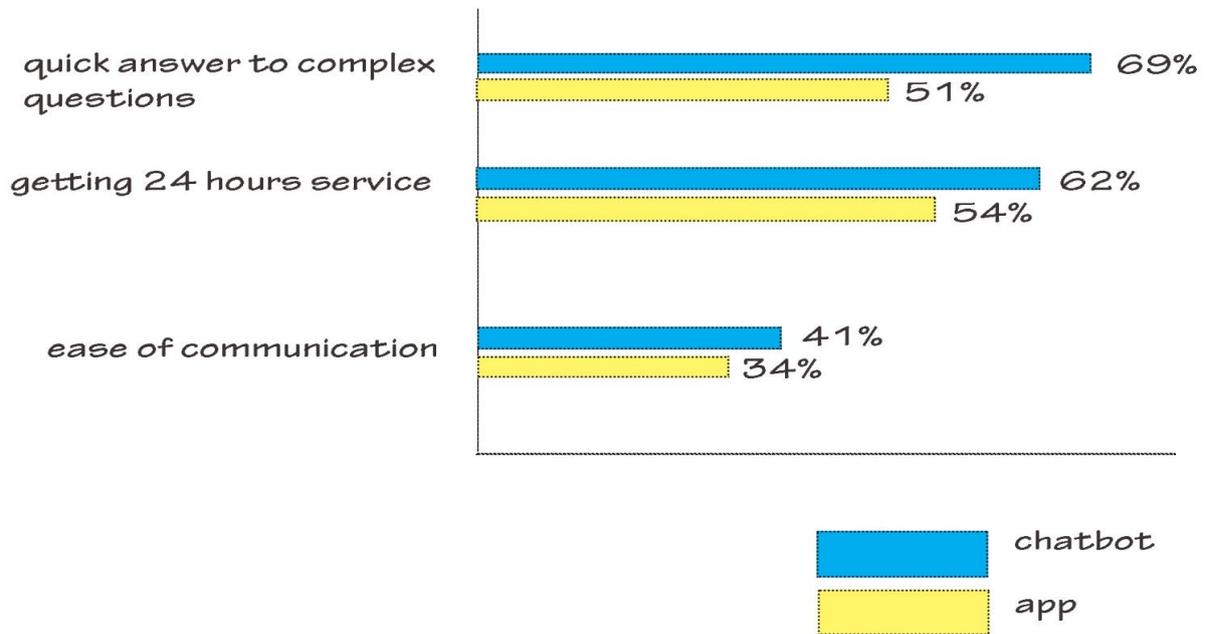
Fig. 2: Chatbot vs App (Barchart)

The above data has been collected by a market research website which conducted various chatbot related data enquiry and compared efficiency with and without a chatbot to determine which way end users find more satisfaction, the above data represents any chatbot of any respective website which may be e-commerce or university FAQ inspite of finding result for any specific chatbot it collected data considering all chatbot in a single domain, it specifically concentrate on the service provided by the respective websites.

3.   Chatbot by 2020:

By 2020, over 80% of businesses are expected to have some sort of chatbot automation implemented (Business Insider, 2016)
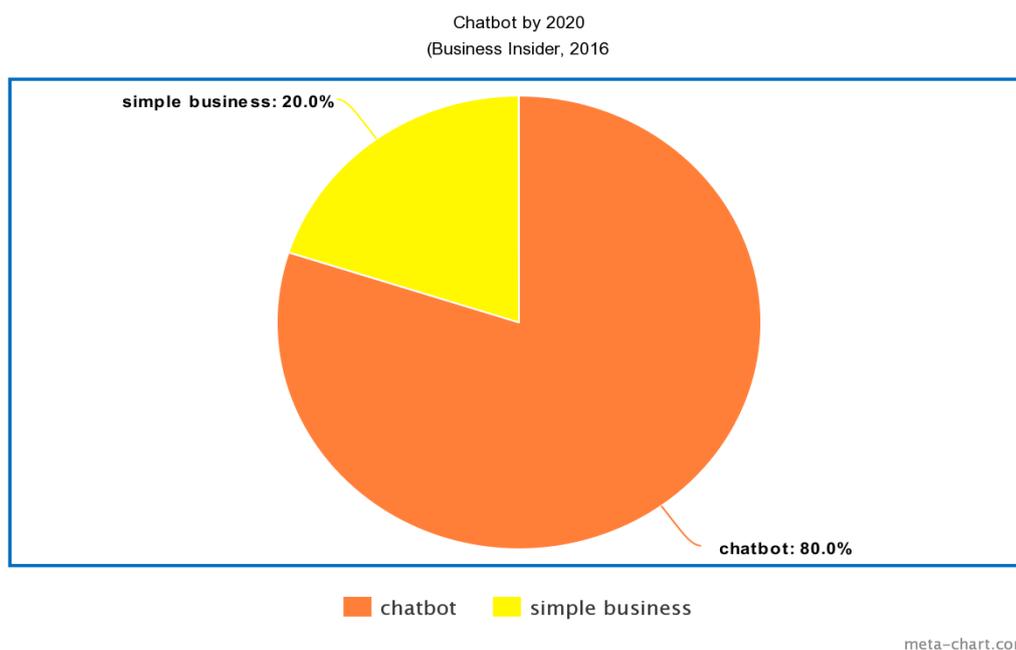

Fig. 3: Chatbot by 2020(pie chart)

CONCLUSIONS AND FUTURE WORK

In proposed system we develop a artificial intelligence based system,which provide human computer interaction throughout the procedure of training and placement operations in the view of both end user's and admin's interests taking into consideration, we automate the process to an extent to produce efficient output than any other previously proposed system which included manual approach and provide with efficient amount of recommendation communication with user interests.Artificial intelligence is one of the promising tech which provide full automation over any system. This system provide full solution to the manually done procedure of TPO. Also provide student list who have appropriate profile for a particular job. Improvises student skill set by taking various computer based exams.

The way every trend of modern world is shifting towards Artificiel Intelligence and automation it is obvious that chatbot holds a remarkable position in business in comming days not only in business but also every day to day regulated operational services, a recent survey by leading website business insider revealed that by 2020, over 80% of businesses are expected to have some sort of chatbot automation implemented (Business Insider, 2016).

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