Project report

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| Project ID | : | SPS\_PRO\_310 |
| Project Title | : | AI Chatbot Recruiter |

Team name : Jatin and Rahul

Challenge title: IBM Hack Challenge 2020

Introduction:

52% of talent acquisition leaders say that the most difficult part of their job is to shortlist the right candidate and 3% of candidates never hear back from a company after one touchpoint. On the flip side, it’s a challenge for employers to communicate well with all their candidates. For high volume recruiting, this would require communicating with thousands of candidates, in addition to a recruiter’s normal screening functions and other duties. Artificial Intelligence enabled software bots can definitely provide a solution for this problem.

Literature Survey:

* Existing problem:
  + - When we talk about campus recruitments or any other type of recruitment where a certain company plans for mass hiring, it becomes a tedious task for the recruiters in the initial rounds as the volume of students applying and getting shortlisted is pretty high. An interview panel after a certain number of candidates get to a state where they might not have a fresh state of mind as the had in the initial interviews. This might affect an efficient recruitment process as it takes a lot of company time, human effort and workforce.
    - Setting this aside, we know the kind of situation we’re in right now. With the growing number of coronavirus cases in the country and the world, Physical distancing is being given an utmost importance like never before. Therefore, the norm of interacting face to face will have to be given a second thought.
* Proposed solution:
  + - By using various IBM cloud services, we will be able to create an AI chat-bot recruiter which will have a straight forward conversation with the candidate in order to judge his/her problem solving, analytical skills with the respective speed based on their replies.
    - Therefore, this will indeed save the company a lot of time usually spent in a recruitment process and minimize face to face interaction.
    - Software Bot enabled with Artificial Intelligence, which screens the candidate application, shortlists for interview and identify his skills & personality traits through conversation.
    - This chat-bot can be deployed on a dedicated web framework using Node-Red.

Software Designing:

As mentioned, we’ve used various IBM cloud services. They’re as follows:

* IBM Watson Assistant
  + This service is used to create and train a vital organ of the chat-bot that is to detect the type of user inputs like greetings, gratitude, queries etc., and answer appropriately.
  + We create different types of intents and entities in order to detect the user input and then set it up with the appropriate answer in the Dialog node.
  + In order to answer a technical query with the trained data on Watson discovery api, webhooks are used which are linked with the dialog node.
  + Finally, we train the conversational skills of the bot by giving it several experimental inputs and observing its outputs. We can train the bot to let it know whether a certain type of query refers to a certain intent/entity. This improves the conversational skills of our chat-bot.
* Node-Red Application
  + The final step of our project is to integrate each and everything used to interact with the user and present it on a Web-based dashboard.

Future Scope

* A smart document understanding feature of Watson discovery can be added which will mainly focus on candidate’s knowledge of the company. A pdf brochure will be taken and trained for this.
* A few more developments in the web dashboard can make it a bit more apt for the candidate to attend their interview.

Conclusion

* It can now be safely said that AI will indeed change the way things are operated and looked into. As much as truth lies in the fact that a person can be perfectly judged face-to-face, desperate times do call for desperate measures and with a little more training, testing and validating, an AI powered chat-bot can help an organisation out up to a possible level to judge a candidate.

Bibliography:

GitHub repository: <https://github.com/SmartPracticeschool/SBSPS-Challenge-1320-AI-Chatbot-Recruiter>