**PROJECT REPORT**

**Introduction**

**Overview**

This Project requires many different types of tools to be used in order to make a good and effective recruiting Chatbot which interacts with the candidate smartly. Mostly IBM cloud services will be used in this project as they are vast and expansive in nature.

Using Watson Assistant service, we create an AI infused BOT which is

1. Taking the Resume link ( of google drive) from the user
2. Organising a basic questionnaire, for the job posted.
3. The scores are sent to the HR of the Company for whom the job is posted,
4. Emails are also sent to the candidate for further on the basis of Selection and Rejection.

**PURPOSE**

With the Covid-19 Pandemic hitting around the world, the idea of

Physical Meetings for the recruitment process and selection of a perfect candidate for a JOB role is obsolete , risky and tedious.

The world aims at globalisation and advancement, A person sitting in India, doesn’t necessarily have to go to USA to get selected for a particular job offer.

With our advanced recruitment buddy, “RECROT”, A candidate can easily Apply for the job Posted, Will be tested for basic skills so that the HR has an insight about the candidate’s credibility and can further decide to conduct other levels of interview with him or not.

**Literature survey**

**Existing problem**

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 touch point. 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.

**Proposed Solution**

We Aim at making an AI infused Software BOT which helps in easing down the Recruitment Process for any firm by the following aspects:

•Our Software BOT will be directly interacting with candidate applying for a specific job profile.

•The chatbot will be able to access the candidate’s Resume/CV by Multi channelling in which the candidate can just send the link of their resume.

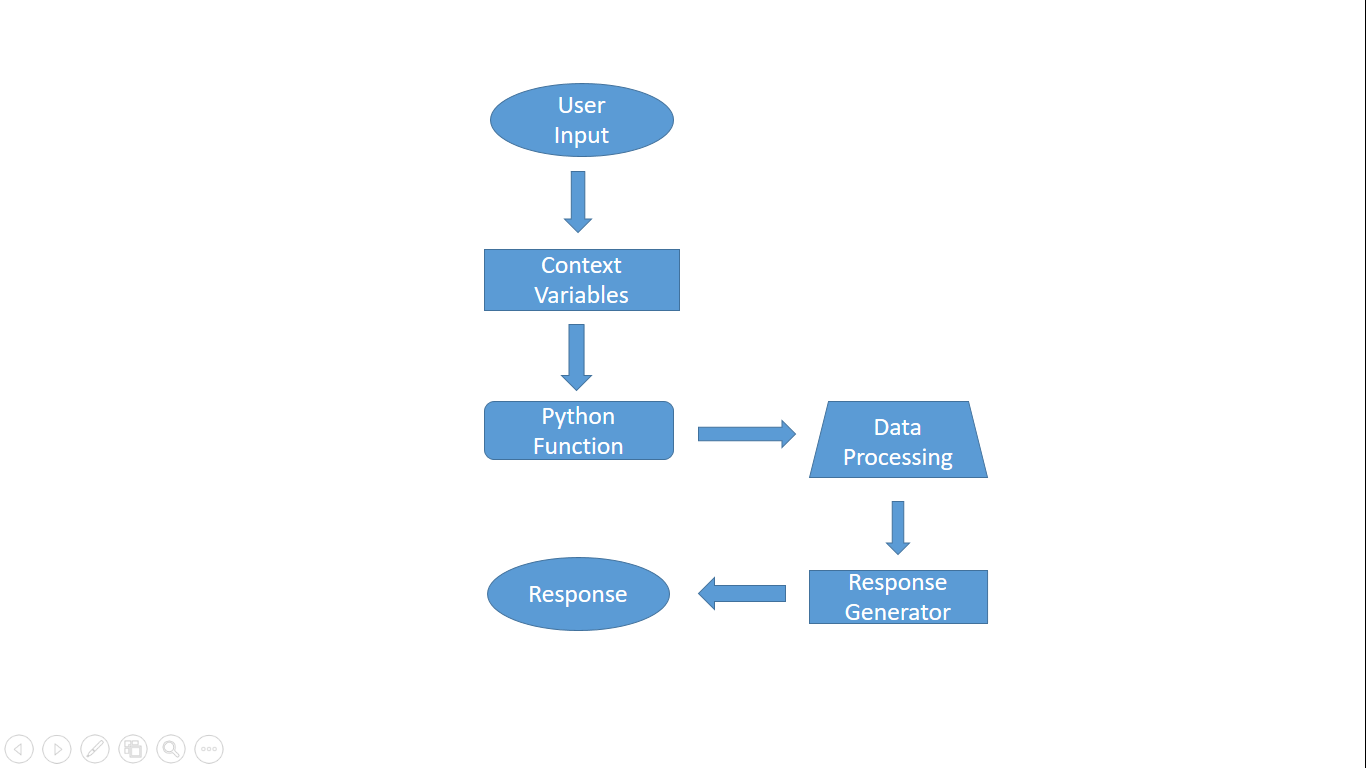
•The Candidates who is having maximum number of skills according to the requirement and projects in his/her resume or CV will be given preference.

•The screening procedure will include various steps to deeply analyze the candidate's potential through various rounds.

•And after the completion of all the rounds, a score is generated through which the firm can decide that if the candidate is eligible for that particular job or not.

**Theoretical Analysis**

**Block Diagram**



**Software Design:**

1. Using IBM Watson for creation of the bot.
2. Score Generation is Done with the help of Python 3.7.
3. Interaction with the candidate to ensure its not some other BOT.
4. Automated Email Sent to HR, with the help of Python Library (smtplib)
5. Service is so fast, as soon as the chatbot completes with the questionnaire round and interview procedure, immediately an email is sent to the HR with the attached Score Card of the candidate.

**Experimental Investigation**

We live in times where we are participants in a Turing test of sorts every day. From customer grievance cells to sales pop-ups to HR communications, we often interact with chatbots without always realizing that we are doing so. Imagine a recruiter reaches out to you over a job portal chat, asks you relevant questions, responds with thought and empathy, answers all your queries about the job at hand and outlines the next steps adequately. Would you be able to tell if the recruiter were an AI chatbot or a human?

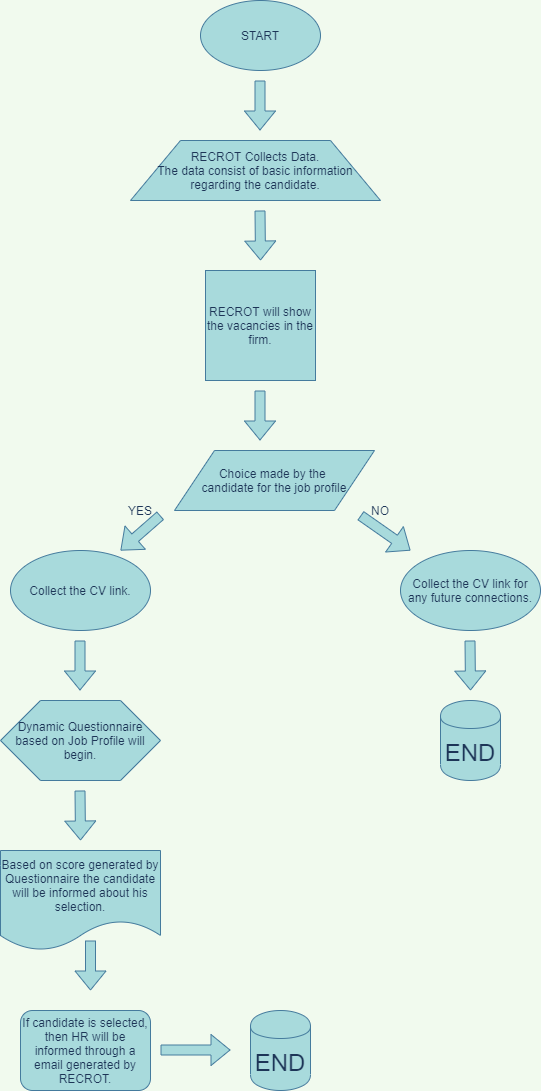
Amidst the debate of whether AI is here to steal our jobs or make our jobs easier, recruiting chatbots are becoming an integral part of the talent acquisition process. If you think about it, the part of the recruitment process that is mutually disliked by most recruiters and candidates alike is the initial sourcing stage. There is often a huge bulk of applications to navigate through, both sides get impatient with the screening, there is enough scope for missing out on key skills as well as red flags and the time crunch often leads to the wrong decisions. With intelligent chatbots in place, this entire process segment can now be moved out of the purview of human recruiters who can then focus on strategic aspects of acquiring and managing the right talent. Conversational bots are quickly making this transition seem a lot more natural.

Sophisticated conversational AI bots have the ability to understand context and intent, allowing them to have open-ended conversations with candidates that go far beyond survey-like multiple choice questions.

This more natural conversational experience lets them glean deeper insights into candidates. Moreover, conversational bots can follow multiple new threads in a conversation, recognize ideas beyond the immediate context and then navigate back to the original topic. With their ability to ask and answer questions, conversational bots give candidates an opportunity to express themselves in their own words while also providing them with additional information about the position.

When looking for an “ideal” fit AI-powered recruitment tool, it is important to consider the goals your organization is trying to achieve, where technology can supplement or improve your current processes and what is needed to create widespread adoption by both candidates and recruiters.

**FLOWCHART**



**Result**

With the help of our software bot RECROT, we can make recruitment process much more easier with automation of almost 80%, its reliable, handy , easy to communicate and convenient to use.

The Final Conclusion is an AI infused software bot with basic dynamic questionnaire for prima facie of conduct.

**ADVANTAGES:**

## .Screen Candidates and Assess their Potential

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2.Help Quickly Schedule Interviews

3.Promptly Answer User Queries and Provide Instant Solutions

4.Help Manage Employee Referrals Effectively

5.Keep Talent Pool Engrossed and Engaged with Less Effort

6.Enhance Candidate Experience

**Disadvantages:**

1. We have designed the bot for a single job at a time, only one job can be posted at an instance, however we plan to do it for others too further,
2. A possible solution to this could be making the bot available to different different platforms when needed for different job profiles.
3. Creation of a Database for storing the information of the candidate is lacking, even right now we are using the google drive link for the candidate, we plan to take the pdf or the word file from the user.

**APPLICATIONS:**

Everywhere where the recruitment process is necessary!

Every field, take it technology , law everything!

**Conclusion**

So the conclusion is that Our Chatbot RECROT will not only reduce the human interaction between the Interviewer and the Candidates but also will lessen up the workload of the firm. By using Recrot they can quickly analyze the basic knowledge of the candidate regarding the Skills he/she have mentioned in the CV/Resume.

**Future Scope-**

Making it much more efficient by correcting the flaws and disadvantages, making it more reliable and workable.

**Python Code Used:-**

#

#

# main() will be run when you invoke this action

#

# @param Cloud Functions actions accept a single parameter, which must be a JSON object.

#

# @return The output of this action, which must be a JSON object.

#

#

import sys

import smtplib

from email.mime.multipart import MIMEMultipart

from email.mime.text import MIMEText

def main(dict):

    count=0

    name=dict.get('name')

    Cmail=dict.get('email')

    resumeLink= dict.get('resume')

    mno=dict.get('mno')

    Cand=""+Cmail

    a1=int(dict.get('a1'))

    a2=int(dict.get('a2'))

    a3=int(dict.get('a3'))

    a4=int(dict.get('a4'))

    a5=int(dict.get('a5'))

    if a1==4:

        count=count+1

    if a2==4:

        count=count+1

    if a3==1:

        count=count+1

    if a4==4:

        count=count+1

    if a5==3:

        count=count+1

    #return {"message": a5}

    from\_addr = "recrot.ai.recruiter@gmail.com"

    to\_addr = "prateekc231@gmail.com"

    msg = MIMEMultipart()

    msg['From']=from\_addr

    msg['To']= to\_addr

    msg['subject']="Selected Candidate"

    body= 'Hello HR, We have selected ' + name + ' for Personal Interview round. The Recrot has given '+ name + ' a ' + str(count) + ' star rating on the scale of 1 to 5. ' +'Please contact '+ name +' through Email:- ' + Cmail +' and Resume: '+ resumeLink

    #body= 'Hello ' + name +', Thank you for taking the time to talk to us about the web developer position. You have successfully Completed the basic questionnaire and assessment, It was a pleasure getting to meet you and we think that you’d be a good fit for this role, You will he hearing from our HR executive Soon for the further interview, Also, feel free to reach out if you have any questions, email us at,'+ from\_addr + ' Regards!!'

    msg.attach(MIMEText(body,'plain'))

    email = "recrot.ai.recruiter@gmail.com"

    password = "RecRot@bot\_ai"

    mail=smtplib.SMTP('smtp.gmail.com',587)

    mail.ehlo()

    mail.starttls()

    mail.login(email,password)

    text=msg.as\_string()

    Cmsg = MIMEMultipart()

    Cmsg['From']=from\_addr

    Cmsg['To']= Cand

    Cmsg['subject']="Interview for Web Developer Position"

    Cbody= 'Hello ' + name +', Thank you for taking the time to talk to us about the web developer position. You have successfully Completed the basic questionnaire and assessment, It was a pleasure getting to meet you and we think that you’d be a good fit for this role, You will he hearing from our HR executive Soon for the further interview, Also, feel free to reach out if you have any questions, email us at, '+ from\_addr + ' Regards!!'

    Cmsg.attach(MIMEText(Cbody,'plain'))

    Ctext=Cmsg.as\_string()

    Rmsg = MIMEMultipart()

    Rmsg['From']=from\_addr

    Rmsg['To']= Cand

    Rmsg['subject']="Update on your application for web developer position: Not Shortlisted for Interview Round"

    Rbody=' We thank you for your Application , We appreaciate the efforts you had put behind the entire process and we hope you had learnt a lot during the whole exercise. However, we regret to inform you that your application is NOT SHORTLISTED for the Interview round.Wish you all the best for opportunities ahead! Regards.'

    Rmsg.attach(MIMEText(Rbody,'plain'))

    Rtext=Rmsg.as\_string()

    #return {"message": body}

    if count>=3:

        mail.sendmail(from\_addr,to\_addr,text)

        mail.sendmail(from\_addr,Cmail,Ctext)

    else:

        mail.sendmail(from\_addr,Cmail,Rtext)

    mail.quit()

    return {"message": a5}

**Biblography-**

1. Smartinternz bootcamp session2
2. Cognitive AI classes
3. IBM Watson tutorials