

AI Enabled Candidate Resume Screening Application

1.INTRODUCTION:-

1.1.Overview:-

Artificial intelligence has made huge inroads into the human resource domain lately. Companies are now deploying AI tools to reduce or eliminate time-consuming tasks in the recruitment process. According to experts, screening resumes is the most critical, albeit, the most labour-intensive and challenging task for HR personnel.

Typically, an HR recruiter of a medium and large corporation gets thousands of job applications. When a single position attracts hundreds (or even thousands) of resumes, there's no time to sift through them all. The applications will be all over the map and require hours and hours of screening. And, that's where AI tools come into play. With the right AI tools, recruiters can sort the applications in a fraction of time.

This way, hiring managers will only see the most relevant candidates. According to a recent LinkedIn survey, 67% of HR professionals said that technology is helping them save time. A majority also reported that AI is a valuable tool for sourcing, screening, and nurturing candidates.

1.2.Purpose:-

Screening resumes and finding the best among them is considered one of the most tedious tasks in the recruitment process. It has been a manual process for decades. Now AI has challenged this traditional approach and automate the process with much higher accuracy. With AI it is possible to screen thousands of resumes of people and other pros in a few seconds. According to a recent LinkedIn survey, 67% of HR professionals said that technology is helping them save time. This project aims at building a software which can screen the applicant's resume and send an email alert regarding their candidature. So, the main purpose of this application is to build an easiest way for screening resumes.

2.LITERATURE SURVEY:-

2.1.Existing Problem:-

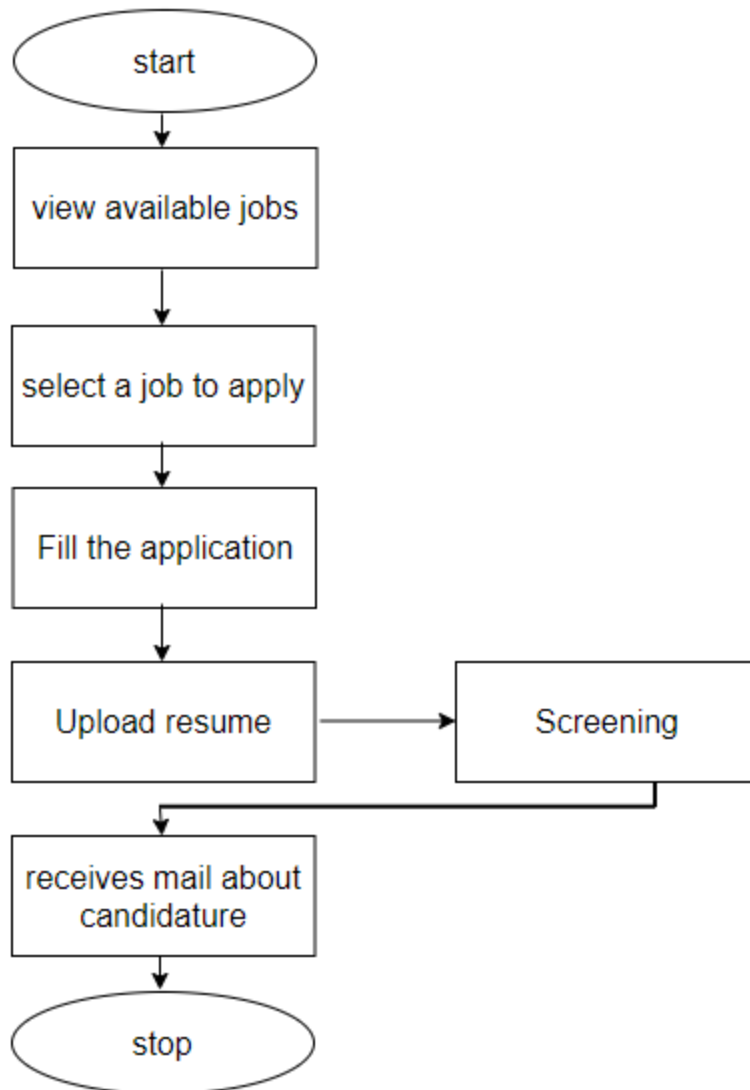
- Resume screening is the most time-consuming part of the recruiting process for high volume agency and internal recruiters.
- Stats from LinkedIn shows that recruiters spend an average of 23 hours on screening resumes for a single hire.
- Considering that the average job opening receives at least 250 resumes, of which 75% can be unqualified, it's no surprise that talent acquisition leaders report the hardest part of recruitment is screening candidates from large applicant pools.

2.2.Proposed Solution:-

- Using recruiting automation or AI resume screening is a potential solution to this problem.
- A resume parsing software can do it in a few seconds and saves most of the time of recruiters. It extracts candidate information from resumes and hire them according to their skills.
- AI provides a simple way not only to reach out to possible candidates, but also screen and shortlist their resumes based on the skills most relevant to your company.
- This application is used to screen the applicant's resume and send an email alert regarding their candidature.

3.THEORITICAL ANALYSIS:

3.1.Block Diagram:-



3.2.Hardware/Software designing:-

Software Requirements:

- OS - Windows 7,8,10
- Anaconda Command Prompt

- Spyder Software

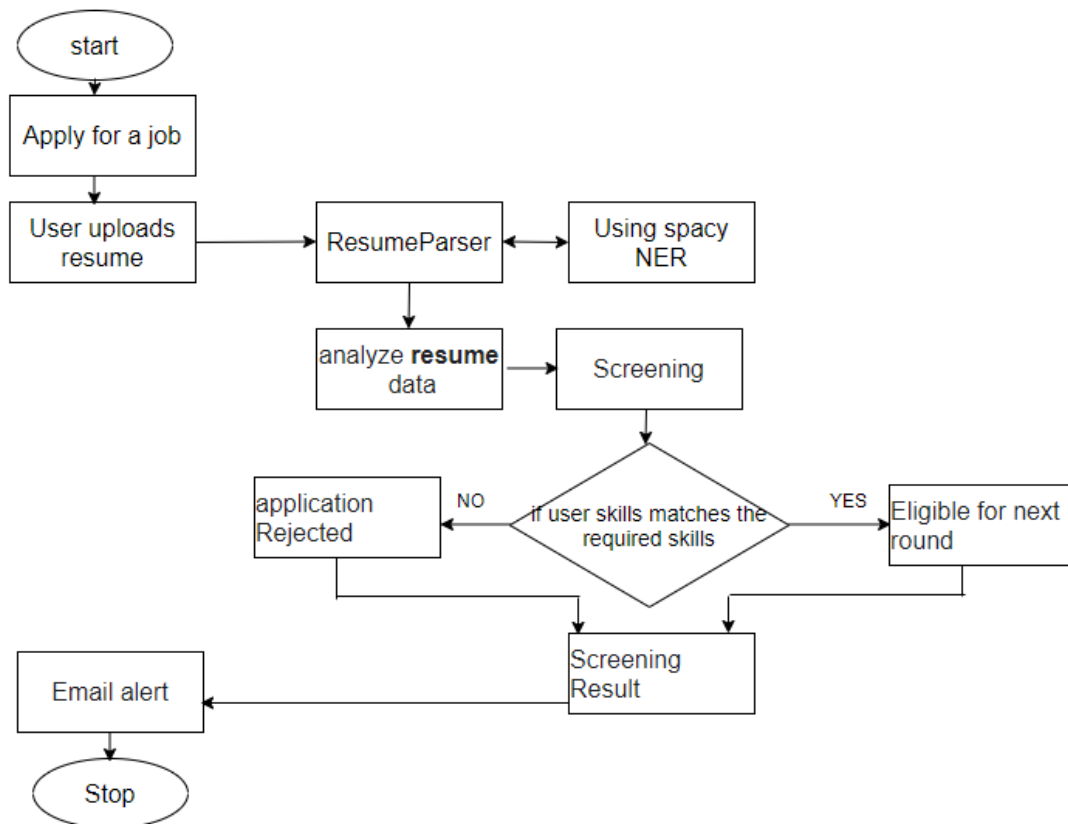
Hardware Requirements:-

- Processor - i3
- RAM - 4GB
- Hard disk storage-10GB

4.EXPERIMENTAL INVESTIGATIONS:-

A number of surveys says that recruitment process is most time consuming part so this will become our problem statement. While spending time for observing all the resumes they can only select a few candidates, so that the time spending on viewing non-selected candidates resume was wasted. The main objective of this application is to reduce the human efforts for screening a pool of resumes. This needs the resume as the main input and majority of screening will be done based on their skills. AI enables us to provide new techniques and solutions to solve these types of requirements.

5.FLOW CHART:-



6.RESULTS:-

- User needs to fill the application form for applying a job.He needs to upload their resume as a basic input for job application.Finally,the user receives an email about their candidature.
- Once the resumes are uploaded, resume parsing tools scan each document and extract all relevant information and applications, based on a recruiter's needs.
- In most cases, relevant information includes specific job skills, work experience, contact information, education credentials, professional certifications, and so forth.

- This application finds the best candidate with the skills that are matched with the required skills.

7.ADVANTAGES AND DISADVANTAGES:-

Advantages:-

- **Save recruiters time:**A resume parsing software can do it in a few seconds and saves most of the time of recruiters.
- **Find the best candidate:**The AI tools help to eliminate such irrelevancy by making accurate resume screening using proper keyword matching. It increases the chances of interviewing the most potential candidates for a job opening.
- **Reduce manual efforts:**AI tools are programmed to eliminate human efforts.

DISADVANTAGES:-

- A lot of AI-based tools are still on a learning phase and errors can happen.Issues with accuracy and reliability.
- Too much dependency on certain keywords.AI depends very much on certain keywords to scan through their pile of candidates.

8.APPLICATIONS:-

- In Administrative sector,this type of resume screening applications will be

very useful for hiring new faculty.

- Mostly this type of applications are used for recruitment process. Many software companies may prefer to use this.
- Some applications of AI are business applications , Marketing , finance, telecommunications ,search engines,banking ,health care etc.

9.CONCLUSION:-

In this competitive talent market, it is essential to reach potential candidates faster and engage them better. The volume of candidate applications is going up always, and organizations need AI tools for resume screening to identify qualified candidate quickly.

10.FUTURE SCOPE:

Looking at the features and flexibility of this application we may definitely stick to AI. Seeing at the development of AI is it that the future world is becoming artificial. The new paradigm of non-biological computation and intelligence is growing exponentially. Further, the world is developing too fast towards AI. So that the applications of AI will become more useful in future.

11.BIBLIOGRAPHY:

<https://ideal.com/ai-recruiting/>

<https://hirebee.ai/blog/smart-candidate-screening-with-hirebee/>

<https://www.virtasant.com/blog/the-new-hr-how-ai-evolved-the-hiring-process>

12.

a)Source code:

```
from flask import Flask, render_template, request
from werkzeug.utils import secure_filename
import smtplib
from pyresparser import ResumeParse
# creates SMTP session
s = smtplib.SMTP('smtp.gmail.com', 587)
s.starttls()
SUBJECT = "Interview Call"
python_skills = ["ml", "ai", "matplotlib", "seaborn", "python", "reression", "algorithms",
"Pandas", "data analysis", "keras", "tensorflow", "artificial intelligence", "data
visualization", "opencv"]
java_skills = []
app = Flask(__name__)
@app.route('/')
def homepage():
    return render_template('index.html')
@app.route('/apply_job')
def applyjob():
    return render_template("apply_job.html")
@app.route('/fill_form')
```

```

def fillform():
    return render_template("form.html")

@app.route('/uploader', methods = ['GET', 'POST'])
def upload_file():
    if request.method == 'POST':
        f = request.files['file']
        f.save(secure_filename(f.filename))
        data = ResumeParser(f.filename).get_extracted_data()
        name = data['name']
        email = data['email']
        skills = data["skills"]
        actual_skills = [i.lower() for i in skills ]
        # using list comprehension
        # checking if string contains list element
        Skills_matched = [ele for ele in actual_skills if(ele in python_skills)]
        if(len(Skills_matched) >= 4 ):
            print("he is eligible")
s.login("rneelima29@gmail.com", ".....")

TEXT = "Hello "+name + ",\n\n"+"Thanks for applying to the
job post AI/ML Developer , Your skils matches our requirement.
Kindly let us know the available time for initial round of interview.

\n\n\n\n Thanks and Regards, \n\n Talent acquistition Team, \n\n
Smartbridge""

message = 'Subject: {}'.format(SUBJECT, TEXT)
s.sendmail("rneelima29@gmail.com", email, message)

```

```

s.quit()

return render_template('form.html',prediction =

        ""Thanks for applying youwill be mailed about
        your candidature"")

else:

print("sorry we cant process your candidature")

s.login("rneelima29@gmail.com", ".....")

TEXT = "Hello "+name + ",\n\n" + ""Thanks for applying to the job post
AI/ML

Developer , Your candidature is rejected.

\n\n\n\n Thanks and Regards, \n\n Talent acquistition Team, \n\n
Smartbridge""

message = 'Subject: {}\n\n{}'.format(SUBJECT, TEXT)

s.sendmail("rneelima29@gmail.com", email, message)

s.quit()

return render_template('form.html',prediction =

        ""Thanks for applying youwill be
        mailed about your candidature"")

else:

return render_template('index.html')

if __name__ == '__main__':

app.run(debug = True)

```

b)OUTPUTS :-

```
Anaconda Prompt (anaconda) - python app.py

(base) C:\Users\dell>cd C:\Users\dell\Downloads\NEELIMA INTERNSHIP FILES\AI-Enabled-Candidate-Resume-Screening-Using-Spacy-Entity-Recognition-main\AI Enabled Candidate Resume Screening Using Spacy Entity Recognition main

(base) C:\Users\dell\Downloads\NEELIMA INTERNSHIP FILES\AI-Enabled-Candidate-Resume-Screening-Using-Spacy-Entity-Recognition-main\AI Enabled Candidate Resume Screening Using Spacy Entity Recognition main>python app.py
* Serving Flask app "app" (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: on
* Restarting with stat
* Debugger is active!
* Debugger PIN: 223-595-167
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
```



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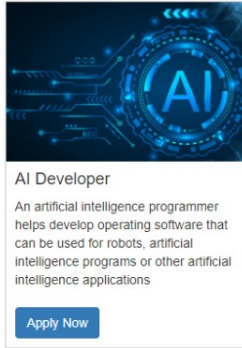
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- Hands-on Training Programs
- Professional Development Programs
- Summer Practice Schools



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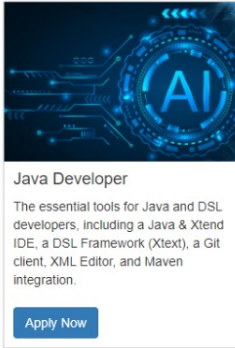
Available Jobs



AI Developer

An artificial intelligence programmer helps develop operating software that can be used for robots, artificial intelligence programs or other artificial intelligence applications

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Java Developer

The essential tools for Java and DSL developers, including a Java & Xtend IDE, a DSL Framework (Xtext), a Git client, XML Editor, and Maven integration.

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Uplaod Resume:

Choose File

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