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NexGen Resume Parser

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ABSTRACT: "NexGen Resume Parser" revolutionizes recruitment through advanced NLP techniques, assigning ATS scores for compatibility assessment and providing personalized job recommendations. The platform offers proactive feedback to candidates, enhancing their experience and improving their chances of securing employment. By leveraging intelligent algorithms, it optimizes the matching process between talent and job opportunities, fostering meaningful connections in the job market. The system aims to reshape recruitment processes, promoting efficiency and inclusivity.

I. INTRODUCTION

Introducing "NexGen Resume Parser," a transformative platform utilizing advanced NLP techniques to reshape recruitment. It analyzes resumes comprehensively, assigning an ATS score for candidate evaluation. Beyond assessment, the platform offers personalized job recommendations aligned with individual profiles. The proactive feedback mechanism empowers candidates with actionable insights for improvement. With intelligent algorithms, the system optimizes the matching process between talent and employment opportunities. "NexGen Resume Parser" represents a significant advancement in recruitment technology, aiming to enhance efficiency and inclusivity in the job market.

II. RELATED WORK

Prior research in recruitment technology has focused on various aspects, including resume parsing, ATS optimization, and candidate matching algorithms. Traditional methods often rely on keyword matching and simplistic algorithms, leading to limited accuracy and efficiency. Some recent approaches incorporate machine learning and NLP techniques to enhance resume analysis and candidate evaluation. However, there remains a need for a comprehensive platform that seamlessly integrates advanced algorithms with proactive candidate support to revolutionize the recruitment process.

III. EXISTING METHOD

Existing resume parsing systems often rely on keyword matching and basic algorithms, leading to limited accuracy and efficiency. These systems may struggle to comprehensively evaluate resumes and provide meaningful insights to candidates. Moreover, traditional approaches lack proactive candidate support, resulting in a passive candidate experience. There is a clear need for an innovative solution that leverages advanced NLP techniques to overcome these limitations and enhance the recruitment process.

IV. PROPOSED METHOD

The proposed "NexGen Resume Parser" utilizes advanced NLP techniques to thoroughly analyze resumes and evaluate candidate profiles. It assigns an ATS score for compatibility assessment and provides personalized job recommendations based on individual qualifications. The platform features a proactive feedback mechanism, delivering real-time insights to candidates for continuous improvement. By leveraging intelligent algorithms, "NexGen Resume Parser" optimizes the matching process between talent and job opportunities, revolutionizing recruitment in the digital age.
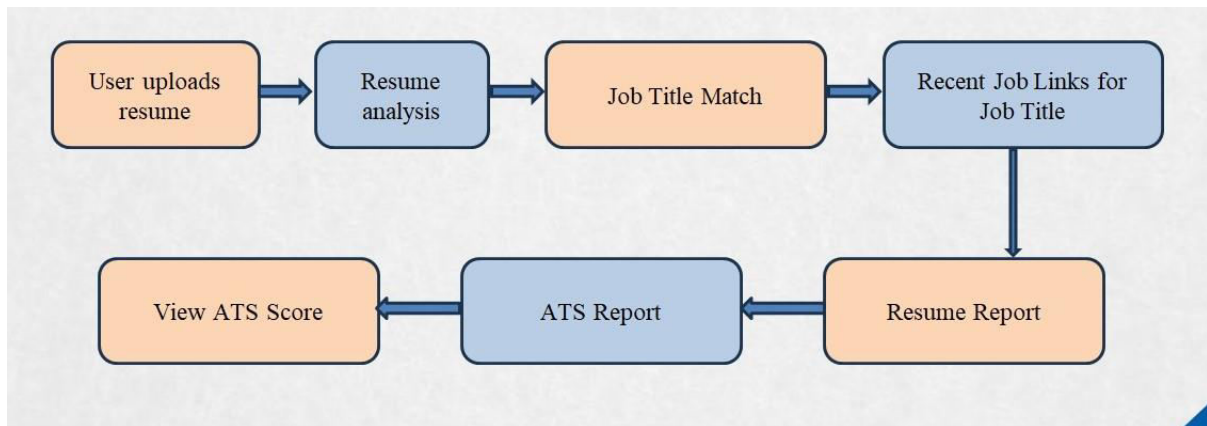
Fig 1: Flow Chart

V. SIMULATION RESULTS


```
1   import streamlit as st
2   import pdfplumber
3   from sklearn.feature_extraction.text import CountVectorizer
4   from sklearn.metrics.pairwise import cosine_similarity
5   import re
6   import requests
7   from bs4 import BeautifulSoup
8   from datetime import datetime, timedelta
9   import matplotlib.pyplot as plt
10  import io
11  import sys
12  import base64
13  import spacy
14  import phonenumbers
15  import pandas as pd
16  import time
17  from collections import Counter
18  import matplotlib.pyplot as plt
19  import seaborn as sns
20  import random
21  import string
22  from streamlit import components
23  from pdfminer.high_level import extract_text
24  from pdf2image import convert_from_path
25  from PIL import Image
26  import pytesseract
27  import enchant
28  import mimetypes
29  import language_tool_python
30  from textblob import TextBlob
31  from PyPDF2 import PdfReader
32  import docx2txt
33  from zipfile import BadZipFile
34  import PyPDF2
35  from docx import Document
36  from email.mime.text import MIMEText
```

Fig 2.1: Code

```
from spellchecker import SpellChecker
from nltk import pos_tag, word_tokenize
from langcodes import Language
import langid
import sounddevice as sd
from pydub import AudioSegment
from linkedin_jobs_scraper import LinkedinScraper
from linkedin_jobs_scraper.events import Events, EventData
from linkedin_jobs_scraper.query import Query, QueryOptions, QueryFilters
from linkedin_jobs_scraper.filters import RelevanceFilters, TimeFilters, TypeFilters, ExperienceLevelFilters
import requests, pickle
from bs4 import BeautifulSoup
import re
from webdriver_manager.chrome import ChromeDriverManager
from googlesearch import search
from jinja2 import Template
import base64
import json
from email.mime.text import MIMEText
from email.mime.multipart import MIMEMultipart
from urllib.request import urlopen as uReq
from bs4 import BeautifulSoup as soup
import traceback
from requests_html import HTMLSession


st.set_page_config(layout="wide", initial_sidebar_state="collapsed", page_title="Resume Parser", page_icon="🚀")
# Define functions for each page
# Initialize ATS score


# Global variable to store ATS scores for each resume
ats_scores = [0.0]

# Function to calculate ATS score
def calculate_ats_score(matched=True):
```

Fig :2.2 :Page config setting

```
            #MainMenu {visibility: hidden;}
            header {visibility: hidden;}
            </style>
            """
st.markdown(hide_st_style, unsafe_allow_html=True)
# Define the generate_captcha function
image_url = "https://d3kqdc25i4tl0t.cloudfront.net/articles/content/57aca545fa80af785f1df9127cf971fe_HeroWhatisanATS.jpg"
centered_image = f'<div style="display: flex; justify-content: center;"><img src="{image_url}" width="450"></div>'
# Display the centered image
st.markdown(centered_image, unsafe_allow_html=True)

# Add a fixed black-colored footer with white text at the bottom of the page
st.markdown(
    """
    <style>
        body {
            margin: 0;
            padding: 0;
        }

        footer {
            position: fixed;
            bottom: 0;
            left: 0;
            width: 100%;
            background-color: black;
            padding: 10px;
            color: white;
            text-align: center;
        }
    </style>
    """,
    unsafe_allow_html=True,
)
```
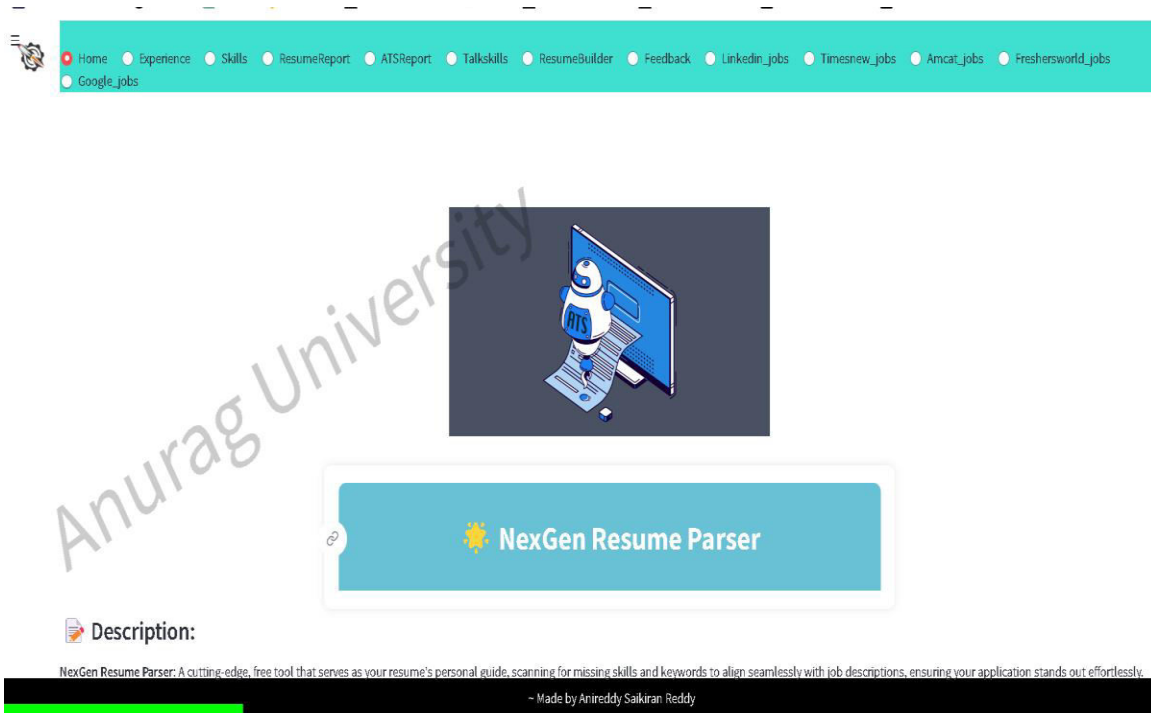
Fig:2.3:Css for page
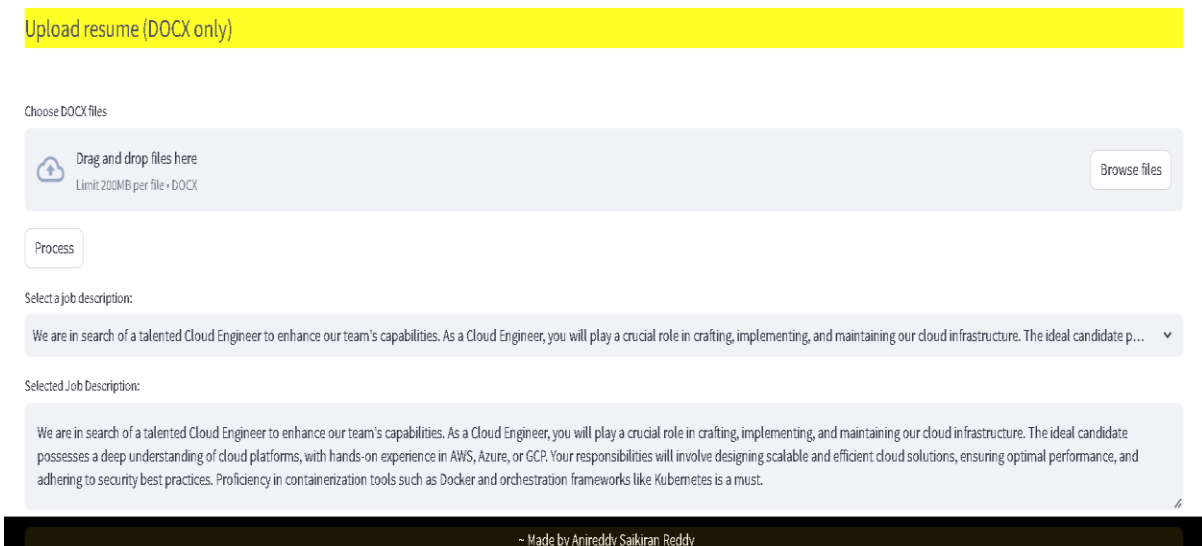
Fig:2.4: Home page

Fig :2.6 : Home Page for uploading resume

○ Home ○ Experience ○ Skills ○ ResumeReport ○ ATSReport ○ Talkskills ○ ResumeBuilder ○ Feedback ● Linkedin_jobs ○ Timesnew_jobs ○ Amcat_jobs ○ Freshersworld_jobs ○ Google_jobs

🔍 Job Details

Title: Software Development Engineer

Company: BharatX

Link: https://in.linkedin.com/jobs/view/software-development-engineer-at-bharatx-37846642117?refId=CeIFBa7HjmvRVWdRSCQeRg%3D%3D&trackingId=XCxH4fNfCP%2BB4Gdx%2FzvKCQ%3D%3D&position=1&pageNum=0&trk=public_jobs_jserp-result_search-card

Rating: 0.0

Please Refresh for New Jobs

Title: Software Engineer

Company: Fi

Link: https://in.linkedin.com/jobs/view/software-engineer-at-fi-3785037257?refId=CeIFBa7HjmvRVWdRSCQeRg%3D%3D&trackingId=aM8Y0IQFpXO9HdOcLTSyYw%3D%3D&position=2&pageNum=0&trk=public_jobs_jserp-result_search-card

Rating: 0.0

Please Refresh for New Jobs

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This app scrapes job data from MyAmcat and displays job links posted within the last 30 days.

Enter job role:

Software Developer

Enter location:

Hyderabad

Scrape Jobs

Scraping completed successfully!

Job Links posted within the last 30 days:

https://www.myamcat.com/jobs/description/senior-manager-powertrain-proprietary-purchase-in-tata-motors-in-jamshedpur-pune/90852

https://www.myamcat.com/jobs/description/senior-manager-mgr-aq-dashboard-interior-trims-in-tata-motors-in-jamshedpur-pune/90851

https://www.myamcat.com/jobs/description/senior-manager-mgr-aq-cfm-gears-shafts-shifting-systems-in-tata-motors-in-jamshedpur-pune/90850

https://www.myamcat.com/jobs/description/sr-manager-in-tata-motors-in-hubli-hyderabad-vijayawada/90849

https://www.myamcat.com/jobs/description/full-stack-developers-job-for-fresher-in-vidyalai-in-kochi/90832

VI. CONCLUSION AND FUTURE WORK

The In conclusion, "NexGen Resume Parser" represents a revolutionary platform that leverages advanced NLP techniques to reshape recruitment processes. The system offers comprehensive resume analysis, personalized job recommendations, and proactive candidate support, enhancing efficiency and inclusivity in the job market. By optimizing the matching process between talent and employment opportunities, "NexGen Resume Parser" fosters meaningful connections and facilitates successful career transitions. Moving forward, the framework laid out by this platform promises to drive continued innovation in recruitment technology.

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