

Project Documentation: CareerCraft

1. Introduction

Project Name: CareerCraft

Description: CareerCraft is an ATS-Optimized Resume Analyzer designed to enhance job applications and accelerate career growth. This platform leverages advanced ATS technology to offer valuable insights into resume compatibility with job descriptions. Key features include resume optimization, skill enhancement, and career progression guidance.

2. Features

- ATS Optimized Resume Analysis
- Resume Optimization
- Skill Enhancement
- Career Progression Guidance
- Tailored Profile Summaries
- Streamlined Application Process
- Personalized Recommendations
- Efficient Career Navigation

3. Technical Stack

- **Programming Languages:** Python
- **Libraries and Tools:**
 - dotenv: For managing environment variables
 - streamlit: For building the web application
 - streamlit_extras: For additional Streamlit functionalities
 - google.generativeai: For interacting with Google's generative AI model

- PyPDF2: For PDF text extraction
- smtplib: For sending emails
- email.mime: For creating email content
- PIL: For image processing

4. Environment Setup

4.1. Prerequisites

- Python 3.x
- Required libraries (listed in [requirements.txt](#))

4.2. Installation

1.Clone the repository:

```
git clone <https://github.com/abhishekhbisht11/ATS-Optimized-Resume-Analyzer-using-Gemini.git>
cd <ATS-Optimized-Resume-Analyzer-using-Gemini>
```

2.Create a virtual environment and activate it:

```
python -m venv venv
source venv/bin/activate # On Windows use `venv\Scripts\activate`
```

3.Install the required libraries:

```
pip install -r requirements.txt
```

4.Create a `.env` file in the root directory and add the following keys:

```
GOOGLE_API_KEY=YOUR_API_KEY
```

5. Code Overview

5.1. Import Statements

```
from dotenv import load_dotenv
import streamlit as st
from streamlit_extras import add_vertical_space as avs
import google.generativeai as genai
import os
import PyPDF2
import smtplib
from email.mime.text import MIMEText
from email.mime.multipart import MIMEMultipart
from PIL import Image
```

5.2. Configuration and Initialization

```
load_dotenv()
EMAIL_ADDRESS = os.getenv('EMAIL_ADDRESS') # Your email address
EMAIL_PASSWORD = os.getenv('EMAIL_PASSWORD') # Your email password

genai.configure(api_key=os.getenv('GOOGLE_API_KEY'))
model = genai.GenerativeModel('gemini-pro')
```

5.3. Function Definitions

```
def get_gemini_response(input):
    response=model.generate_content(input)
    return response.text

def input_pdf_text(uploaded_file):
    reader=PyPDF2.PdfReader(uploaded_file)
    text=''
    for page_num in range(len(reader.pages)):
        page=reader.pages[page_num]
        text+= str(page.extract_text())
    return text
```

5.4. Streamlit UI Implementation

Introduction Section

```
## streamlit UI INTRODUCTION
st.set_page_config(page_title="Resume ATS Tracker",layout="wide")

avs.add_vertical_space(4)

col1, col2 = st.columns([3,2])
with col1:
    st.title("CareerCraft")
    st.header("Navigate the Job Market with Confidence!")
    st.markdown("""<p style='text-align: justify;'> Introducing CareerCraft, an ATS-Optimized Resume Analyzer - you
        career growth. Our innovative platform leverages advanced ATS technology to provide job
        seekers with valuable insights into their resume compatibility with job descriptions.
        From resume optimization and skill enhancement to career progression guidance, CareerCraft
        empowers users to stand out in today's competitive job market. Streamline your job application
        process, enhance your skills, and navigate your career path with confidence. Join CareerCraft
        today and unlock new opportunities for professional success!
    </p>""", unsafe_allow_html=True)

with col2:
    st.image('https://cdn.dribbble.com/userupload/12500996/file/original-b458fe398a6d7f4e9999ce66ec856ff9.gif', use
avs.add_vertical_space(10)
```

Resume ATS Tracking Application

```
## Resume ATS Tracking Application:
col1, col2 = st.columns([3,2])
with col1:
    st.markdown("<h1 style='text-align: center;'>Embark on \
        Your Career Adventure</h1>", unsafe_allow_html=True)
    jd=st.text_area("Paste the Job Description")
    uploaded_file=st.file_uploader("Upload Your Resume", type="pdf",
        help="Please uplaod the pdf")
    submit = st.button("Submit")

if submit:
    if uploaded_file is not None:
        text=input_pdf_text(uploaded_file)
        response=get_gemini_response(input_prompt)
        st.subheader(response)

with col2:
    img2 = Image.open("images/icon2.jpg")
    st.image(img2, use_column_width=True)
    avs.add vertical space(10)
```

5.5. FAQ and Contact Us Sections

FAQ Section

```
## FAQ
col1, col2 = st.columns([2, 3])
with col2:
    st.markdown("<h1 style='text-align: center;'>FAQ</h1>", unsafe_allow_html=True)
    st.write("Question: How does CareerCraft analyze resumes and job descriptions?")
    st.write("""Answer: CareerCraft uses advanced algorithms to analyze resumes and job descriptions,
    identifying key keywords and assessing compatibility between the two.""")
    avs.add_vertical_space(3)
    st.write("Question: Can CareerCraft suggest improvements for my resume?")
    st.write("""Answer: Yes, CareerCraft provides personalized recommendations to optimize your resume
    for specific job openings, including suggestions for missing keywords and alignment with desired job roles.""")
    avs.add_vertical_space(3)
    st.write("Question: Is CareerCraft suitable for both entry-level and experienced professionals?")
    st.write("""Answer: Absolutely! CareerCraft caters to job seekers at all career stages, offering
    tailored insights and guidance to enhance their resumes and advance their careers.""")
with col1:
    img3 = Image.open("images/icon3.jpg")
    st.image(img3, use_column_width=True)
avs.add_vertical_space(3)
```

Contact Us Section

```
# contact us column build by me personally uses smtp to send email
col1, col2 = st.columns([2, 3]) # Adjust column widths as needed

with col1:
    st.subheader("Contact Us")
    st.write("Have any questions or feedback? Feel free to reach out!")

    # Input fields for user
    contact_email = st.text_input("Your Email", key="contact_email")
    message = st.text_area("Your Message", key="contact_message")

    # Send button logic
    if st.button("Send", key="contact_submit"):
        if contact_email and message:
            try:
                # Create the email
                msg = MIMEText()
                msg['From'] = EMAIL_ADDRESS
                msg['To'] = 'piyushkashyap3247@gmail.com' # Replace with your support email
                msg['Subject'] = "New Contact Us Message"

                # Email body
                body = f"From: {contact_email}\n\nMessage:\n{message}"
                msg.attach(MIMEText(body, 'plain'))

                # Connect to SMTP server and send email using gmail
                with smtplib.SMTP('smtp.gmail.com', 587) as server: # Use your SMTP server details
                    server.starttls() # Secure the connection
                    server.login(EMAIL_ADDRESS, EMAIL_PASSWORD)
                    server.send_message(msg)

                st.success("Thank you for contacting us! We'll get back to you soon.")
            except Exception as e:
                st.error(f"An error occurred: {e}")
        else:
            st.warning("Please fill in both your email and message.")

# Add this after all other UI element
st.markdown("""---""", unsafe_allow_html=True) # Add a separator

# Center align text using CSS
footer_text = st.markdown("""<p style='text-align: center;'>Developed by Abhishekh Bisht!
&copy; 2024</p>""", unsafe_allow_html=True)
```

6. Future Work

- **Enhanced Analytics:** Implement more sophisticated algorithms for resume analysis.
- **User Profiles:** Allow users to create profiles and save their resume analysis history.
- **Integration:** Integrate with LinkedIn or other job platforms for seamless application

submission.

7. Conclusion

CareerCraft is a robust platform designed to optimize resumes and enhance career progression. With its advanced ATS technology and user-friendly interface, it provides valuable insights and personalized recommendations to job seekers.