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MTech Data Science
Mini Project for “CS 760: Natural Language Processing”

Please find the Project Files here…
https://github.com/vlsravani/NLP_MiniProject

End-to-End Web Application for Resume Analyzing using NLP

Aim & Purpose

- Technology is playing a very vital role in changing our lives in many ways. There are many sectors that benefited after implementing technology in it. With the use of Artificial Intelligence, every field and industry is growing widely.
- The main purpose of building this project is to create a working model suitable for the corporate hiring world. The purpose of this project is to give the perfect recommendation based on the resume of the user. It will provide the user with the recommendation of the skill-related working industry, tools & technology, courses, and resume writing techniques. So with this help, users can create a better resume so which will increase their chances of getting a job in a good company.

Tools & Technologies

- Python Programming
- Spacy & Pyparser for NLP
- Streamlit for Backend
- PDFMiner for extracting PDF
- Base64 for PDF displaying
- Pillow
- Numpy
- Github for management
- Pycharm IDE
- Web Scraping

Key-Features of the application

Resume Store / Remove

PDF Extracting

Career Recommendation Based on Skills

Course Recommendation Based on Skills

Skills Recommendation Based on Skills

Use-Case Diagram

The system is defined for two types of users,

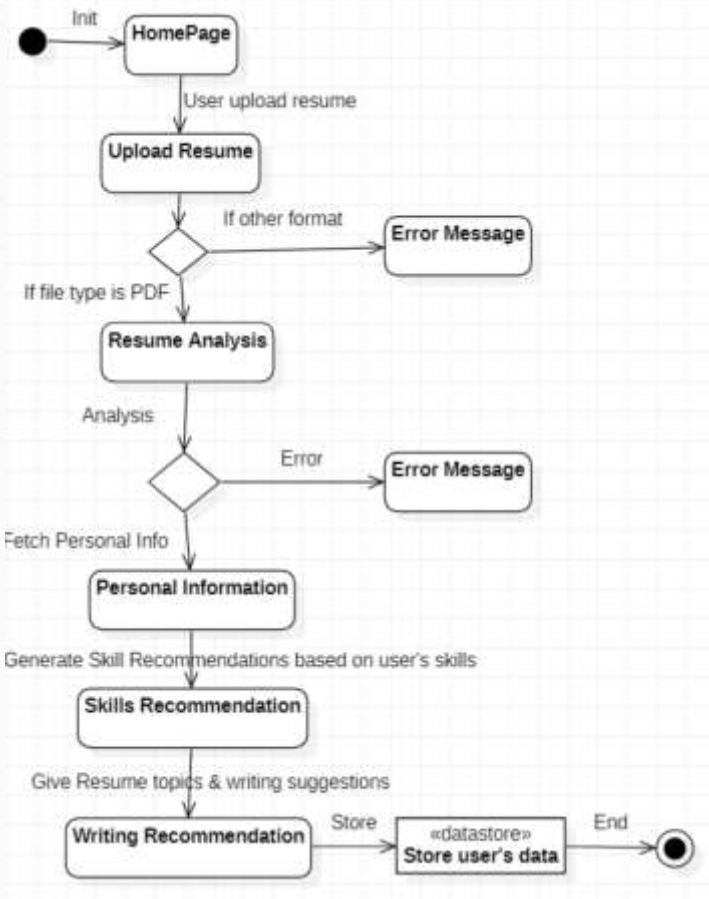
- Admin:

Can only access all user's data who previously used the system.

- Normal User:

Can upload their resume, receive recommendations based on resume features, and can delete their resume from the system.

Work Flow Chart



Database

Table Name: user_data

Column Name	Data Type	Description
ID	Auto Increment	Unique User ID
User Name	Varchar (50)	Full Name of user
Email ID	Varchar (50)	User Email ID
Resume_score	Varchar (10)	User's auto generated score
Time_stamp	Varchar (50)	Time stamp
Page_no	Varchar (5)	Number of pages
User_Level	Varchar (10)	User Experience
Actual_skills	Varchar (300)	User's actual skills
Recommended_skills	Varchar (300)	User's Recommended skills
Recommended_courses	Varchar (600)	Recommended courses

Accessibility

User	Admin
Upload the Resume	Do Login
Check the own information	Check the all user's report
Check the skills/career recommendations.	Can export the report in CSV.
Check the Courses/Certifications recommendations.	Admin can see the Data Analytics

Admin will be only one. User can be multiple.

Future Work

- Currently this web application is deployed locally, our future aim is to deploy on the internet (like AWS, etc.).
- The present working model supports only PDF format for uploading the resume.
- This system currently works with limited types of fields and recommendations (i.e., only IT professionals), so scope for more fields for all sorts of resume recommendations.
- No chart data or visualizations on the user side

References

- [1] Mr. Chirag Dariyani | Gurmeet Singh Chhabra | Harsh Patel | Indrajit Chhabra "An Automated Resume Screening Using Natural Language Processing And Similarity" Published in Ethics and Information Technology
- [2] Shubham Bhor | Vivek Gupta | Vishak Nair | Harish Shinde | Mansi Kulkarni "A Resume Parser Using Natural Language Processing Technique" Published in International Journal of Research in Engineering and Science (IJRES)
- [3] Streamlit Documentation | Documentation from Streamlit Developer Community
- [4] OpenCV Documentation | Documentation from OpenCV Developer Community
- [5] Pillow Documentation || Official documentation from PIL Developer Community
- [6] NLTK Documentation || Official documentation from NLTK Developer Community
- [7] PyResParser Documentation || Official documentation from PyResParser Developer Community
- [8] PDFMiner Documentation || Official documentation from PDFMiner Developer Community

THANK YOU!!!