



CodeCraft: Unleashing Langchain & LLMs

Resume Analyser

- Chaitanya N(PES2UG22CS138)
- Dishanth K(PES2UG22CS186)





Problem Statement

To effectively addresses the challenge of enhancing employability by providing personalized resume analysis and skill recommendations, offering valuable insights to job seekers and empowering them to align their skill sets with industry demands, ultimately improving their job search success.





1. Data Processing:

- Utilize PDF parsing techniques to extract text content from uploaded resumes.
- Employ basic text processing methods to tokenize, clean, and preprocess the resume text.





2. Resume Analysis:

- Apply keyword extraction to identify relevant skills and qualifications mentioned in the resume.
- Use basic pattern matching or rule-based methods to categorize resume sections such as education, work experience, and skills.





3. Skill Recommendation:

- Implement a simple rule-based system to recommend additional skills based on the identified keywords and job role.
- Prioritize skills commonly associated with the user's field of interest or industry.





4. Course Recommendations:

- Curate a small list of online courses or learning resources relevant to the recommended skills.
- Present course recommendations based on predefined mappings between skills and courses.





5. User Interface Design:

- Develop a straightforward web interface using Streamlit for resume upload and result display.
- Design intuitive widgets for users to interact with, such as buttons for skill recommendation and course suggestions.





Pipeline





Phase 1: Data Processing

• Libraries Used:

- o streamlit: For building the web application interface.
- opyresparser: For parsing the resume and extracting information.
- opdfminer3: For parsing PDF files to extract text content.

- o User uploads a PDF resume using the Streamlit file uploader widget.
- The uploaded PDF file is processed using PDF parsing techniques from the pdfminer3 library to extract text content.





Phase 2: Resume Analysis

• Libraries Used:

 None used explicitly but involves string processing and pattern matching.

- The extracted text content from the resume is analyzed to identify key information such as name, email, contact details, and skills.
- o Basic string processing techniques are employed to categorize resume sections such as education, work experience, and skills.





Phase 3: Skill Recommendation

• Libraries Used:

 streamlit_tags: For displaying and interacting with tags in the Streamlit interface.

- Based on the extracted skills from the resume, predefined lists of keywords related to different job roles or industries (e.g., data science, web development) are used to identify the user's field of interest.
- Skill recommendations are provided based on the identified field of interest, using predefined lists of recommended skills for each job role or industry.
- The streamlit_tags library is used to display the recommended skills as interactive tags in the Streamlit interface.





Phase 4: Course Recommendations

• Libraries Used:

o gradientai: For accessing AI models via the Gradient platform.

- User input (query) is collected to specify the skill for which course recommendations are requested.
- An API call is made to the Gradient platform using the gradiental library to access AI models for generating course recommendations based on the specified skill and is fine tuned using some samples.
- The generated course recommendations are displayed in the Streamlit interface.





Phase 5: Resume Score Calculation

• Libraries Used:

o None explicitly used, but involves basic arithmetic operations.

- Each relevant section identified in the resume adds points to the overall score, reflecting the completeness and quality of the resume.
- A simple scoring system, based on a predefined set of criteria, assigns scores to different resume components.
- The total score is calculated by summing up the scores assigned to each resume section.
- The calculated resume score is displayed to the user in the Streamlit interface, providing feedback on the effectiveness of their resume presentation.





Output and results

- Users can upload their resumes and receive detailed analysis results, including extracted information such as skills, education, and work experience.
- Personalized skill recommendations help users identify additional skills to enhance their resumes and improve their job search prospects.
- Course recommendations offer users opportunities for skill development and career advancement based on their identified skills.
- The user-friendly interface enhances the overall user experience, providing a seamless and interactive platform for resume analysis and career guidance.
- The inclusion of resume scoring provides users with actionable feedback on their resume quality, enabling them to make improvements and increase their chances of success in the job market.



Choose User Resume Analyser Choose your Resume Drag and drop file here
Limit 200M8 per file + PDF Built by Team ByteBrawlers MBA-Resume.pdf 21.2KB * + : JANE PROTOTYPE OBJECTIVE A CPA-track position in public accounting leveraging accounting, teamwork, leadership and communication skills to improve service UNIVERSITY AT BUFFALO, THE STATE UNIVERSITY OF NEW YORK BS in Accounting/MBA Registered Accounting Program, Expected May 2015 GPA: 3.554.0 Selected for accelerated 3/2 combined-degree program based on academic achievement EDUCATION EXPERIENCE

Volunteer Income Tax Assistance Program (VITA), University at Buffalo (UB)

Volunteer Tax Preparer, Through UB Chapter of Beta Alpha Pei, Spring 2013

• Provided individualizated tax preparation assistance-belove to low income families in the Buffalo area, as part of essential and recognized VITA community service team

• Recommended tax solutions for families that were consistent with state and faderal tax codes and GAAP principles

• Reviewed detailed financial statements, receipts and other relevant documents with the numest care to ensure the accuracy and integrity of return filings. Ace Automotive Center, Checknowaga, NY
Accounts Psychible & Receivable Intern. Summer 2012

Managed all aspects of accounts psychic and accounts receivable

Reduced overdue accounts, approximately \$30,000, by contacting customers to collect overdue
debts and oftening repayament options

Accounts and oftening repayament options

Accounts and oftening repayament options
of the contacting contacting repayament options

Accounts and oftening repayament options
of the contacting process for better cash flow Wegmans Food Markets, Inc., Amberst, New York
Contourner Service Associates, 10:2010 – 05:2012

Extended thoughful service to customers to build goodwill, enhance satisfaction and reinforce Wegmans' positive brand identity

Teamed with other associates in collaborative manner to efficiently complete important maintenance and eleming tasks assuring a near and clean store for shoppers

Displayed dedication and work either by offering to work extra whils channel have periods

Supported to workers by rotating anto various departments as necessary to maintain swift and outstanding customer services. ACTIVITIES

VP of Technicals, Beta Alpha Psi, Business Human Fratemity, 05/2012 to 05/2013

Arranged and coordinated professional persentations for members by alumni from accounting industry areas such as public, private and government

Practice Interviewer, School of Management, Career Resource Center Center

Conducted practice interviews and provided improvement fractback for fullow undergraduates to help perpose them for behavioral interviews

Student Volunteer, UR Linda Yalem Memorial Run, University at Buffalo Resume Analysis Hello JANE PROTOTYPE Your Basic info Name: JANE PROTOTYPE Email: jprototype@buffalo.edu Contact: 444-444-4444 Resume pages: 1 Skills Recommendation 🢡 Skills that you have ** Our analysis says you are looking for IOS App Development Jobs ** Recommended skills for you. Adding this skills to resume will boost 🖋 the chances of getting a Job 🚃 Enter the skill: Course Recommendations 🤏 Sure, here are some popular courses on Swift programming language: 1. Apple Developer Academy: This is an official course offered by Apple that teaches you how to develop language and provides hands-on experience in building apps.

2. Stanford University's "Learn Swift on iOS": This is a free online course offered by Stanford University that covers the Resume Tips & Ideas 💡 [-] According to our recommendation please add your career objective, it will give your career intension to the Recruiters. [-] According to our recommendation please add Declaration 🧀 . It will give the assurance that everything written on your resume is true and fully acknowledged by you [+] Awesome! You have added your Hobbies 😌 [-] According to our recommendation please add Achievements δ . It will show that you are capable for the required position. [-] According to our recommendation please add Projects 🚨 . It will show that you have done work related the required position or not. Resume Score 📄

** Note: This score is calculated based on the content that you have added in your Resume. **









Why you choose this particular topic?

- 1. Relevance: Resume enhancement is crucial for job seekers.
- 2. Empowerment: Personalized feedback empowers users in their job search.
- 3. Innovation: Leveraging tech improves resume analysis and recommendations.
- 4. Impact: Enhancing resumes boosts career prospects effectively.
- 5. Accessibility: User-friendly web app ensures broad access to assistance.







• Basic Model:

 Offer a basic version of the Resume Analyzer for free, allowing users to upload a limited number of resumes and receive basic analysis and recommendations.

• Premium Subscription:

 Introduce premium subscription plans with enhanced features and benefits for users who require more advanced analysis and personalized recommendations.







• Corporate Plans:

- o Offer tailored plans for businesses and organizations looking to provide career development and skill enhancement resources for their HR employees.
- Corporate plans may include bulk discounts, centralized administration features, and customizable branding options.

• Advertising Revenue:

 Generate revenue through targeted advertising within the platform, leveraging user data and analytics to provide relevant advertising opportunities to advertisers.





Conclusion & Future scope

- The Resume Analyzer project provides personalized career guidance and skill enhancement in the competitive job market.
- Leveraging innovative technology and user-friendly design, the web application empowers users to optimize resumes, receive tailored skill recommendations, and access relevant courses.
- It demonstrates potential to positively impact users' employability and career prospects by aiding in navigating the complexities of the job search process.
- Successful implementation showcases opportunities for future development and expansion, with potential to enhance functionality and broaden reach.
- Overall, the Resume Analyzer project serves as a valuable tool for job seekers, offering comprehensive support and guidance throughout their career development journey.





Thank you!