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Resume Parser and Summarization Using SPACY, NLP and FLASK

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Abstract: *This project focuses on automating the resume screening process by combining Natural Language Processing (NLP) and Web Application Development. Using spaCy, a Python-based NLP library, along with regular expressions, the system extracts relevant information such as names, contact details, educational background, and skills from unstructured resume text. This information is then presented in a structured and readable format. The frontend of the web application is built using React, TypeScript, HTML, and CSS to provide a responsive and user-friendly interface. Users can upload resumes, view summarized outputs, and apply filters based on criteria like skills or names. The backend, developed in Flask, handles resume parsing, user authentication, and data management. The overall goal of this system is to reduce the manual effort required by HR professionals and recruiters during candidate shortlisting, while improving the accuracy and speed of the selection process. The integration of intelligent text processing with a modern web interface provides a practical solution to real-world hiring challenges by streamlining the evaluation of candidate profiles.*

Keywords: NLP, Resume Screening, spaCy, Flask, Web Application, Text Extraction, React, Automation

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