Department of Computer Science and Engineering

Date: 09-04-2025

INDUSTRY ORIENTED MINI PROJECT EXECUTION LETTER

Batch No : 01

Roll Numbers : 227R1A0559, 227R1A0501, 227R1A0531

Title of the Project : Automated Resume Analysis & Skill Matching Website using NLP

We have successfully completed the execution of our mini project titled " Automated Resume Analysis & Skill Matching Website using NLP", under the guidance of Dr. J. Narasimharao, as part of our B.Tech CSE curriculum. We are grateful for the guidance and support throughout the execution.

Guide : Dr. J. Narasimharao (Associate Professor)

Signature of the Students **Signature of the Guide**

ABSTRACT:

Online job postings attract a massive number of applications in a short time, making manual resume screening inefficient, costly, and prone to bias. Many highly qualified candidates are overlooked, leading to hiring mismatches. To address these challenges, we propose an intelligent automated system that leverages Natural Language Processing (NLP) with SpaCy and Machine Learning (ML) to streamline the resume evaluation process.

Our system utilizes SpaCy's NLP capabilities to extract key details such as skills, education, and experience from unstructured resumes and generates concise summaries by eliminating irrelevant information. This significantly reduces the workload for recruiters, making the screening process more effective.

The system employs a vectorization model with cosine similarity to compare resumes against job descriptions, ranking candidates based on relevance. Employers can input job requirements and constraints, and the system automatically evaluates and ranks resumes accordingly. This ensures that only the most suitable candidates are shortlisted, improving hiring accuracy and efficiency.

Furthermore, we have implemented a selection and rejection feature that updates job applicants on their status in real time. Once an administrator selects or rejects an application, the candidate's job card is updated immediately, enhancing transparency in the recruitment process.

By automating resume screening with SpaCy, integrating ML-based ranking, and providing real-time applicant status updates, our system optimizes hiring workflows, minimizes biases, and enables recruiters to identify the best-fit candidates quickly and accurately.