

NLP Topic Proposal

Team Members:

1. Aman Jaglan (G45030269)
2. Harshavardana Reddy Kolan (G30747000)
3. Shrihan Thokala (G36452583)
4. Aravinda Vijayaram Kumar (G36084456)

Resume matching with Job description using NLP

Introduction:

In today's competitive job market, the ability to tailor resumes to match job descriptions is essential for job seekers aiming to stand out. Advances in Natural Language Processing (NLP) have made it possible to automate and enhance this process, allowing for an in-depth analysis of resumes and job postings to identify alignment and highlight key improvements. NLP-driven systems can capture the underlying context, structure, and relevance of skills and experiences, providing job seekers with valuable insights to strengthen their applications and optimize their chances of success.

Objective:

Our project aims to develop a comprehensive platform that supports candidates in enhancing their resumes to align with job requirements effectively. Initially envisioned as a system for resume-job description alignment, our project evolved into a robust tool integrating advanced features such as similarity scoring, skill gap analysis, resume generation, grammar and formatting evaluation, job recommendations, and visualization tools. Using Streamlit, we will create an interactive platform where users can upload resumes, input job descriptions, and receive actionable insights, including skill recommendations and improved formatting. This cohesive approach addresses multiple aspects of resume optimization, offering candidates a valuable resource for navigating the job application process.

Dataset:

The Resume-Dataset by InferencePrince555 is a collection of over 32,000 resumes in CSV format, designed to facilitate research and development in natural language processing tasks related to resume analysis. Each entry includes detailed professional summaries, work histories, education backgrounds, and skill sets, providing a comprehensive resource for training models in resume parsing, information extraction, and job matching applications. The dataset is available under the Apache 2.0 license, allowing for both academic and commercial use.

Link: <https://huggingface.co/datasets/InferencePrince555/Resume-Dataset>