PROJECT TOPIC: Resume Classification using ML

Specialization: CSE

Project Group Members:

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Objective: The main objective of this project is to help students identify whether their CV is relevant to a particular job description or not. Many students apply for jobs without knowing if their resume aligns with the required role, which reduces their chances of selection. This project aims to increase those chances by analyzing resumes and matching them with suitable job profiles.

Tools required:

➢ **Hardware Requirements:**

- Personal Computer / Laptop
- Minimum 8GB RAM
- Intel i5 Processor or Above
- Internet Connection
- Storage (Minimum 100GB HDD or SSD)
- Keyboard and Mouse

➢ **Software Requirements:**

- Operating System: Windows 10 / Linux / macOS
- Python 3.8+
- Scikit-learn
- Pandas
- NumPy
- Matplotlib
- Seaborn
- Jupyter Notebook / Google Colab
- docx2txt
- Git & GitHub

Abstract: In today's competitive job market, manually screening resumes is time-consuming and prone to human bias. This project, titled "Resume Classification using Natural Language Processing and Machine Learning Techniques," automates the screening process using AI. It uses NLP to extract features from resumes and job descriptions, then applies SVM, Random Forest, and Logistic Regression for classification.

The system categorizes resumes into fields like Data Science, Web Development, Software Engineering, and HR. With SVM achieving 90% accuracy, the tool provides relevance scores and improvement suggestions. It benefits both students and recruiters, improving efficiency, accuracy, and the overall recruitment process.

Outcome: