

AI-Powered Resume Screening System:

Objective:

To automate resume screening for HR teams by ranking candidates based on job requirements and skills.

Project Plan:

- Collect datasets of resumes and job descriptions.
- Preprocess text data for skill extraction.
- Train a matching algorithm for ranking resumes.
- Develop a web interface for HR users.

Design and Development Steps:

- Apply NLP techniques to parse resumes and extract key skills.
- Implement similarity algorithms (e.g. cosine similarity) for ranking.
- Train a machine learning model for classification (fit or not fit).
- Build a dashboard for uploading resumes and viewing rankings.

Testing Techniques:

- **Accuracy Testing** : Validate matching and ranking logic.
- **Functional Testing** : Ensure resume parsing works for various formats.
- **User Testing** : Gather feedback from HR professionals.

Suggested Tools:

- **Frontend** : React.js
- **Backend** : Flask
- **Libraries** : NLTK, SpaCy, Scikit-learn
- **Database** : SQLite