

Design Considerations

- **Modularity:** The system is designed to handle additional features, such as integrating machine learning models or custom NLP pipelines.
 - **Scalability:** Capable of processing large volumes of job descriptions and resumes.
 - **User Friendliness:** The interface will enable seamless upload of job descriptions and resumes, with clear and actionable outputs.
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Future Enhancements

1. **Fine-tuned NLP Models:** Improve accuracy by training spaCy models on domain-specific datasets (e.g., IT, healthcare).
 2. **Enhanced Skill Matching:** Use ontologies like O*NET to map skills to job categories for better compatibility analysis.
 3. **Resume Scoring:** Develop an advanced scoring system to rank candidates based on their fit for a specific job.
 4. **Automated Reporting:** Generate detailed PDF/HTML reports summarizing job-candidate compatibility.
 5. **Integration with Recruitment Platforms:** Extend the system to work with LinkedIn or job boards like Indeed.
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Output Example

Input (Job Description):

"Looking for a Python developer with 0-1 years of experience. Skills: Python, Django, REST API."

Parsed Output:

json

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```
{  
  "skills": ["Python", "Django", "REST API"],  
  "experience": "0-1 years"  
}
```