# Automated Resume Screening System

**1. Introduction**

The **Automated Resume Screening System** is a web-based application designed to analyze and rank resumes based on job descriptions. It helps recruiters efficiently shortlist candidates by leveraging **Natural Language Processing (NLP)** and **cosine similarity** to compare resumes with job requirements.

**2. Objectives**

* Automate resume screening and ranking.
* Extract text from **PDF/DOCX** resumes.
* Match resumes against job descriptions.
* Provide a user-friendly interface for recruiters.

**3. Technologies Used**

**Frontend:**

* **HTML, CSS, JavaScript** – For UI design and form handling.

**Backend:**

* **Flask (Python)** – To handle resume uploads and processing.
* **pdfplumber & python-docx** – For text extraction from resumes.
* **NumPy & Regex** – For text processing and similarity calculation.

**4. Methodology**

1. **User uploads a resume** (PDF/DOCX).
2. **Text extraction** is performed using **pdfplumber** (PDF) or **python-docx** (DOCX).
3. **Cosine similarity** compares resume content with the job description.
4. **Ranking scores** are calculated and displayed.

**5. Key Features**

* Secure **resume upload** system.
* **Text extraction** for better analysis.
* **Job relevance scoring** using cosine similarity.
* **Real-time ranking** of resumes.

**6. Results & Benefits**

* **Reduces manual screening time** for recruiters.
* Provides **objective, AI-driven resume ranking**.
* **Improves hiring efficiency** by filtering top candidates.

## **7. Future Enhancements**

Integrate **AI-based resume parsing** for better accuracy.  
🔹 Add **database storage** for resume history.  
🔹 Develop **a recruiter dashboard** for better analysis.

## **8. Conclusion**

The **Automated Resume Screening System** streamlines the hiring process by automating resume shortlisting. It provides recruiters with an efficient tool to identify top candidates, reducing hiring time and improving decision-making.