

# Resume Relevance Checker

## ➤ Introduction

In the modern job market, thousands of applicants compete for limited positions. Recruiters spend a significant amount of time screening resumes to identify the best fit for a given job description (JD). On the other side, candidates often fail to align their resumes with the requirements of a specific job, reducing their chances of shortlisting. A Resume Relevance Checker helps bridge this gap by automatically analysing how closely a resume matches a job description. By identifying matched and missing keywords, it guides candidates to improve their resumes and assists recruiters in efficiently filtering applications.

## ➤ Problem Statement

Traditional resume screening is manual, time-consuming, and prone to errors. Recruiters must read through numerous resumes, and candidates lack tools to measure how well their resumes align with job postings. This creates inefficiency, bias, and missed opportunities.

There is a need for a simple yet effective system that can:

- Compare a resume with a job description,
- Calculate a relevance score, and
- Highlight missing skills and keywords to improve alignment.

## ➤ Objectives

- To design a system that analyses job descriptions and resumes in real-time.
- To extract and compare keywords and skills from both documents.
- To calculate a **relevance score** indicating how well the resume matches the JD.

- To highlight matched and missing keywords for transparency.
- To suggest improvements so that candidates can tailor their resumes more effectively.

## ➤ **Methodology**

### **1. Data Input:**

- User provides a job description and a resume (pasted text or uploaded file).

### **2. Preprocessing:**

- Remove stop words and irrelevant text.
- Tokenize and normalize the text (convert to lowercase, remove special characters).

### **3. Keyword Extraction:**

- Identify important keywords, skills, and tools from the job description.
- Extract corresponding terms from the resume.

### **4. Comparison & Scoring:**

- Compare keywords between JD and resume.
- Compute a **match percentage** using keyword overlap and similarity measures (e.g., cosine similarity).

### **5. Output Generation:**

- Display the relevance score.
- Highlight matched and missing keywords.
- Provide suggested sentences for improving the resume.

### **6. User Interface:**

- Developed using HTML, CSS, and JavaScript for a lightweight, browser-based application.
- Interactive design to allow quick comparisons and feedback.