**Abstract**

The AI Resume Analyzer is a web-based application that helps users evaluate their resumes using machine learning techniques. The system extracts key details from uploaded resumes, such as contact information, skills, and the number of pages. It then compares these details with predefined skill databases to generate recommendations and score the resume for quality. The platform also provides career resources, such as online courses and interview preparation videos. This project aims to assist job seekers in optimizing their resumes, improving job prospects, and streamlining the recruitment process for HR professionals.

**Proposed System**

The proposed system is a **resume analysis tool** powered by **Streamlit and Python**, designed to **automate resume evaluation**. Users upload a PDF resume, and the system:

1. Extracts **textual data** (name, email, phone number, skills) using **PDF parsing**.
2. Matches extracted skills with a **predefined database** of industry-relevant skills.
3. Scores resumes based on **content quality**.
4. Provides **course recommendations** for improving skills.
5. Offers **admin access** to review collected data and track applicant profiles.

**Solution to Existing System Problems**

**Problems in Existing Resume Evaluation Methods**

1. **Manual Screening:** HR teams manually screen resumes, making the process time-consuming and prone to bias.
2. **Inconsistency:** Recruiters may overlook important skills due to varying evaluation criteria.
3. **Lack of Feedback:** Job applicants rarely receive insights into what skills they lack or how to improve their resumes.

**How Our Solution Helps**

**Automated Extraction:** Uses text processing and pattern matching to extract key resume details.  
**Skill Analysis & Recommendation:** Identifies missing skills and suggests learning resources.  
**Objective Resume Scoring:** Provides a fair, unbiased score based on resume content quality.  
**Admin Panel for Recruiters:** Allows recruiters to access stored resumes and search candidates efficiently.

**System Architecture**

The system follows a **three-tier architecture**:

1. **Frontend (User Interface)**
   * Developed using **Streamlit**.
   * Allows users to upload resumes and view results.
   * Provides career improvement resources.
2. **Backend (Processing & Analysis)**
   * Extracts text from resumes using **PDFMiner**.
   * Uses **Regex-based algorithms** to extract skills, emails, and phone numbers.
   * Matches extracted skills against a predefined database.
3. **Database & Storage**
   * Stores **resume analysis results** in a JSON file.
   * Saves uploaded resumes in a secure local directory.
   * Maintains a **course & interview video repository** for skill enhancement.

**System Design**

The system is designed to be **user-friendly and efficient**. Below is a breakdown of its components:

1. **User Module**
   * Uploads resume.
   * Views analyzed results (name, contact details, skills, recommendations).
   * Receives resume **score and improvement tips**.
2. **Resume Processing Module**
   * Converts **PDF resumes to text**.
   * Extracts details using **regular expressions**.
   * Matches skills with **predefined skill sets**.
   * Generates **resume score** based on skill match and quality.
3. **Recommendation Module**
   * Suggests **relevant courses** based on missing skills.
   * Provides **interview preparation videos**.
4. **Admin Module**
   * Secure login for **admin access**.
   * Views **all analyzed resumes**.
   * Exports data for further analysis.