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**Project 1:- JobFit AI: Resume Ranking and Optimization System.**

**Problem Statement:-**

Recruiters and HR teams often receive **hundreds of resumes** for a single job opening. Manually reviewing each resume to check its relevance to the **Job Description (JD)** is **time-consuming, inefficient, and error-prone**.

Existing tools lack the ability to:

* **Automatically analyze and rank multiple resumes** based on their match to a JD,
* **Provide a clear percentage score** showing how closely a resume aligns with the job requirements,
* **Detect whether a resume is human-written, AI-generated, or hybrid**,
* Ensure **fair, transparent, and ATS-friendly screening** for unbiased candidate selection.

This leads to **delayed hiring processes, missed qualified candidates, and ethical challenges** in recruitment.

There is a need for an **AI-powered Resume Builder & Optimizer** that can:

* Parse and evaluate multiple resumes against a JD,
* **Assign a match percentage and ATS score** for each candidate,
* **Label resumes as Human, AI-generated, or Hybrid**,
* **Rank candidates automatically**, helping HR teams shortlist the best-fit applicants quickly and transparently.

**Bounded Scope(In-Scope):-**

The project “AI Resume Builder & Optimizer using LLMs” is designed to assist HR departments and recruiters in automating the resume screening process. The scope includes:

1. **Resume Upload & Parsing**
   * Support for multiple resumes in PDF/DOCX format.
   * Extract key details such as name, skills, education, and experience.
2. **Job Description (JD) Matching**
   * Analyze the JD using NLP.
   * Compare each resume with the JD to calculate a Match Percentage (%).
3. **Resume Classification**
   * Detect whether resumes are:
     + ✅ Human-written
     + 🤖 AI-generated
     + 🔀 Hybrid (AI-assisted + Human).
4. **Ranking & Shortlisting**
   * Rank candidates based on Match % and ATS Score.
   * Display results in a structured HR dashboard with download options.
5. **ATS (Applicant Tracking System) Optimization**
   * Ensure resumes are recruiter- and ATS-friendly.
   * Suggest improvements (grammar, keywords, formatting).
6. **Outputs**
   * Optimized resumes (downloadable PDF/DOCX).
   * HR dashboard showing Candidate Name | Match % | Resume Type | ATS Score | Rank
7. **User Roles**
   * HR/Admin → Upload JD & resumes, view ranking, download results.
   * Candidate (optional) → Upload personal resume & optimize it before applying.

**Flow Of Project:-**

1. **Login Page (optional for HR/Admin)**
   * HR enters username & password.
2. **Dashboard (Main Screen)**
   * Upload JD (text/PDF)
   * Upload Multiple Resumes (PDF/DOCX)
   * Button → Start Screening
3. **Results Page**
   * Show table with:
     + Rank | Candidate Name | Match % | Resume Type (Human/AI/Hybrid) | ATS Score | Action (Download).
   * Option to sort/filter by score or type.
4. **Candidate Details Popup (on clicking a row)**
   * Shows parsed details (Skills, Education, Experience).
   * Shows AI vs Human-written section highlights.
5. **Download Section**
   * Download Original Resume
   * Download Optimized Resume
   * Export Report (PDF/Excel)

**Project 1:- Smart Digital Tourism Guide.**

**Problem Statement:-**

Tourists often face difficulties when visiting a new city due to a lack of proper guidance, information about attractions, hotels, restaurants, and navigation routes. Existing solutions are usually limited to mobile apps or generic maps, which do not provide real-time updates or personalized services.

There is also no platform that allows hotels and restaurants to manage their information, or admins to control the data efficiently. As a result, tourists may waste time, miss attractions, or fail to find suitable services.

The proposed SmartTouristGuide aims to solve these problems by providing a desktop-based multi-login system where:

* Users (Tourists) can browse attractions, hotels, and restaurants, search and filter locations, view details, and save favorites.
* Hotel and Restaurant Admins can manage their information, menus, and offers.
* Super Admin can monitor and control all data, ensuring updated and accurate information.

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**| Start App |**

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**| Select Login Type|**

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**| Enter Credentials|**

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**| Validate Login |**

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**| User | | Hotel | | Restaurant |**

**| Dashboard | | Dashboard | | Dashboard |**

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**| Browse, Search | | Add/Edit/Delete| | Add/Edit/Delete|**

**| Attractions/ | | Hotel Info | | Restaurant Info|**

**| Hotels/Rest. | +----------------+ +----------------+**

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**| Save Favorites |**

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**| Logout / Exit |**

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