Milestone 4

SkillSense: Smart Job Fit Analyser

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The Job Seeker's Dilemma

Judging Resume Fit

Job seekers often find it challenging to accurately gauge how well their resume aligns with a specific job description, leading to missed opportunities.

Identifying Skill Gaps

Many are unaware of the specific skills they lack for a desired role, making it difficult to target their development efforts effectively.

Manual Tailoring Effort

Manually customising resumes for each application is an incredibly time-consuming and often error-prone process.

Project Overview

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What SkillSense Does ?

- SkillSense is an AI-powered resume intelligence system designed to help job seekers understand how well their resume matches a job description and what skills they need to improve.

- It's a personal career assistant, providing actionable insights to land the dream job.

High Level Workflow with Tech Stack

Palash
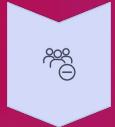
1. Upload Resume
User uploads a resume (PDF/Docx) with automatic text extraction.

2. Extract Skills & Experience
System extracts skills and experience using NLP pipelines (spaCy + rule-based patterns).

3. Process Job Description
Skills, keywords, and context are meticulously extracted from the job description.

4. Semantic Matching
Resume versus JD embeddings are compared using sentence-transformers.

5. Generate Match Score
A similarity score is generated, indicating the overall job fit.

6. Recommend Missing Skills
System identifies and recommends skills present in the JD but missing from the resume.

Tech Stack:

Frontend (UI)

Backend

Database

ML

NLP

OVERVIEW

An intelligent system that compares a candidate's resume with a job description, identifies missing skills, and recommends courses to improve the match score.

Resume Matcher

Technical Workflow

Resume Matcher

Bindu

Missing Skills Highlight:

- Show not just the "match score" but also *which key skills from the JD are missing in the resume*. This gives actionable insights.

Courses / Learning Paths:

- Based on missing skills, recommend relevant courses

- **Growing Skill Gap in Industry**
- **Recruiters Prefer Skill-Aligned Candidates**
- **Self-Awareness Problem**
- **Overwhelming Learning Landscape**

SKILL RECOMMENDER

Why it's Needed & Core Idea

CORE IDEA OF SKILL RECOMMENDER

Input

Job Description Analysis

Skill Gap Detection

Personalised Recommendations

Ranking Among Resumes

Output

SKILL RECOMMENDER

Technical Overflow+Recommendation Algorithms:

SKILL RECOMMENDER:

Technical Workflow:

- Extract skills from candidate resumes using NLP.
- Convert extracted skills into embeddings (vector representations).
- Compare candidate skills with job skill database.
- Rank missing or recommended skills based on similarity.
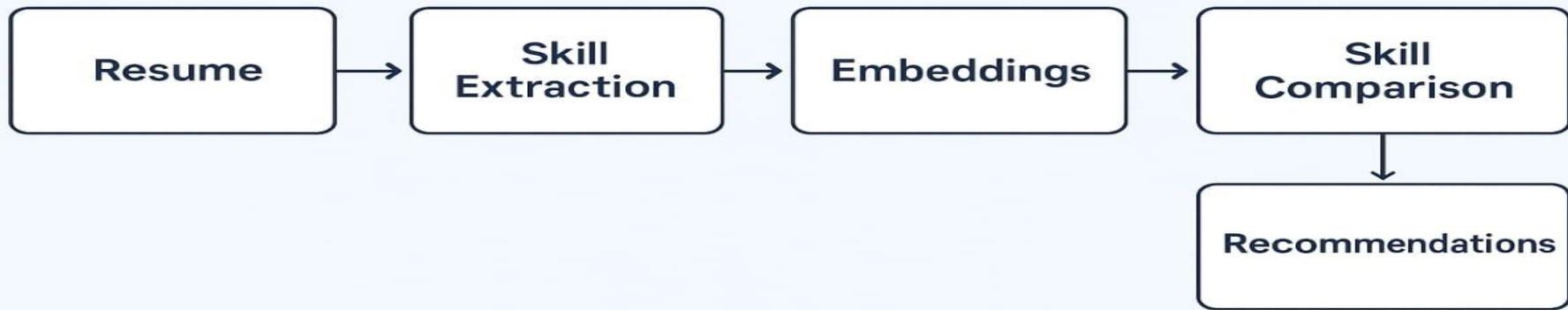
Recommendation algorithm:

- Rule-Based: Directly suggest skills required for a job role.
- Content-Based: Suggest skills similar to candidate's existing skills using embedding similarity.
- Optional: Hybrid approach combines both for optimal recommendations.

*Manikanta
Rashik*

Skill Recommender – Technical Workflow

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Resume → Skill Extraction → Embeddings → Skill Comparison → Recommendations
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SKILL RECOMMENDER

System Architecture & Tech Stack

Om

UI
Enhanced

Layout: Components reorganized into a clean, responsive grid for better clarity and quick navigation.

Visual Polish: Improved spacing, typography, and alignment to deliver a modern, user-friendly interface

🔥 1. Intelligent Dark/Light Mode UI

- Modern UI upgrade with seamless theme switching.

- Auto-saves user preference using local storage.

- Enhances accessibility & reduces eye strain.

- Delivers professional, dashboard-style experience for long evaluation sessions.

- Ensures smooth visual performance without affecting donut-chart analytics.

🤖 2. Built-in SkillSense Chatbot Assistant

- Lightweight, embedded AI helper inside the dashboard.

- Provides instant responses:

    - **Top matching resume**

    - **Missing skills for a candidate**

    - **Skills present in the resume**

    - **Recommended courses to upskill**

    - **Score breakdown for all resumes**

- SkillSense helps users understand how job-ready they are

- Provides match scores and skill recommendations

- Useful for job seekers, career counselors, and placement cells

THANK YOU!

Now, seeing the Project Demonstration….