



NexGen Coders



Vivek Mishra
Avichal Jain
Sanskar Sahu

TalentAI NEXUS

Smart Solutions for Modern Recruitment

PROBLEM STATEMENT

In today's competitive job market, hiring the right talent quickly and fairly is crucial for business success. However, traditional recruitment methods are slow, manual, and often biased, leading to delays and missed opportunities. This inefficiency affects both companies struggling to fill roles and candidates who experience long wait times and lack transparency in the process.

The goal is to develop an AI-driven solution that automates early recruitment stages- resume screening, skill matching, and initial interviews. thereby reducing time-to-hire, minimizing bias, and improving the candidate experience.

PROPOSED SOLUTION

Explain your idea, its technical approach, and how it solves the problem

TalentAI Nexus is an innovative GenAI-powered platform designed to automate the early stages of recruitment, from resume screening to initial interviews. By leveraging advanced AI models, TalentAI Nexus aims to drastically reduce time-to-hire, enhance candidate experience, and minimize unconscious bias, making recruitment faster, fairer, and more efficient.

Features

- **AI Resume Parsing:**
Automatically extracts and analyzes resume data, matching qualifications with job requirements using OCR and NLP.
- **Skill Validation:**
Identifies core competencies and assesses alignment with job descriptions for accurate candidate screening.
- **AI Interview Engine:**
Generates contextual interview questions and analyzes real-time candidate responses using speech-to-text and LLMs.
- **Automated Feedback & Scheduling:**
Provides AI-driven feedback and schedules HR interviews for successful candidates.
- **HR Insights Dashboard:**
Offers performance metrics, interview transcripts, and candidate rankings, enabling data-driven hiring decisions.

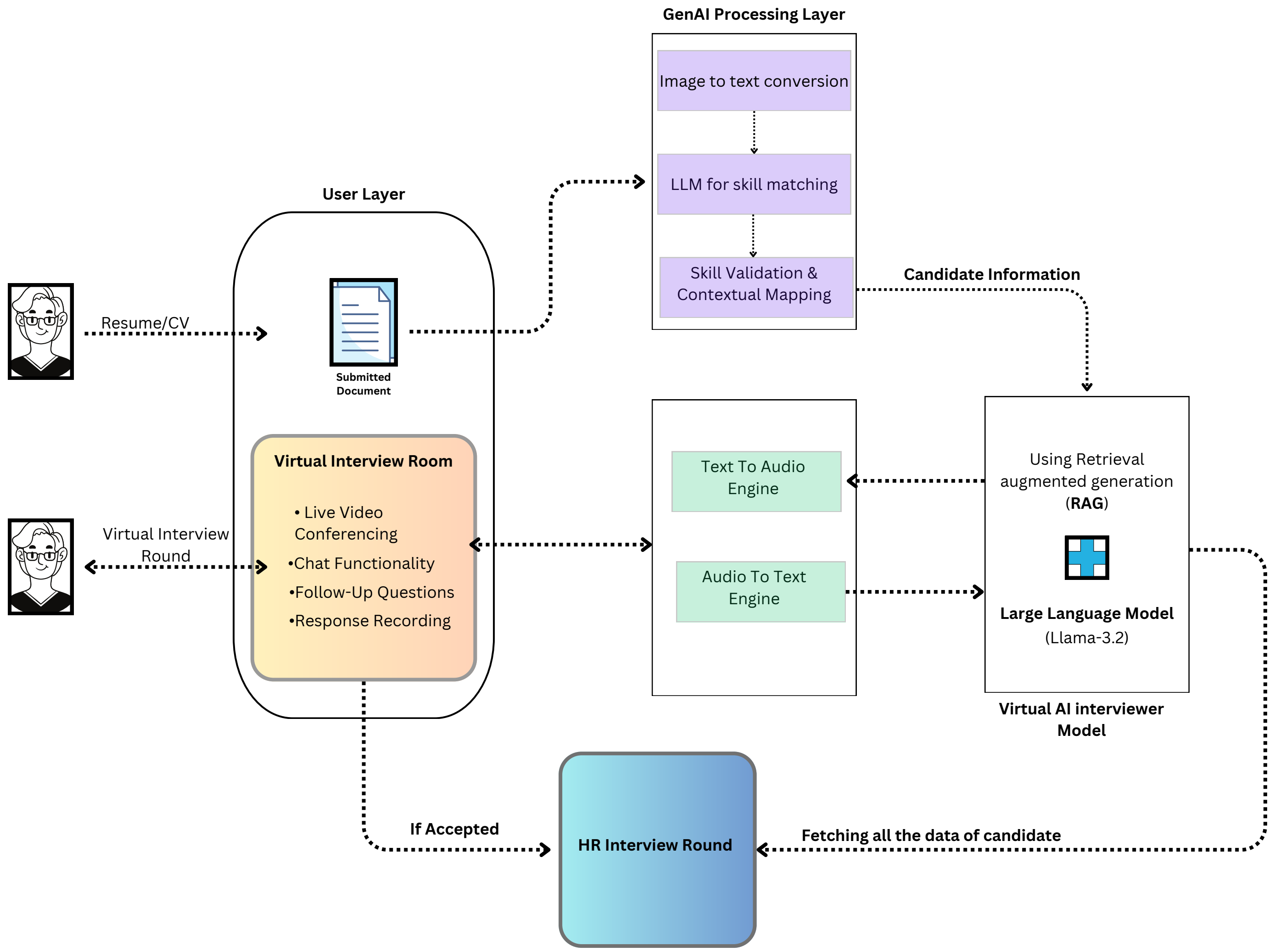
TECHNICAL APPROACH

1. Candidates submit resumes through the React.js portal, with the backend utilizing Node.js and Express to securely store and process these documents. An OCR model or LayoutLM extracts text, and a **Large Language Model (LLM) analyzes skills against job descriptions to shortlist qualified candidates.
- 2.The shortlisted candidates are evaluated by a skill-matching model, which generates insights into their strengths and weaknesses, aiding in the selection process.
3. Shortlisted candidates participate in a virtual interview where the AI Interview Engine generates contextual questions. The Audio-to-Text Engine captures responses in real time, and the LLM Answer Analyzer assesses the quality of these responses.
4. Automatic feedback detailing candidates' skills and communication abilities is provided to HR. Candidates who perform well are scheduled for a final HR interview, focusing on cultural fit, with decisions based on combined AI insights and HR input.

HOW IT SOLVES THE PROBLEM

TalentAI Nexus eliminates inefficiencies and biases in traditional recruitment, automating early processes like resume screening and initial interviews. This leads to faster, data-driven hiring decisions, improved candidate experiences, and reduced HR workload. By streamlining recruitment, companies can find the best talent quickly, maintaining a competitive edge in the talent market.

FLOWCHART



FEASIBILITY

- ◆ Ensure access to diverse and comprehensive datasets for training the AI model. This includes resumes, job descriptions, and interview transcripts.
- ◆ Evaluate the ability to integrate the AI solution with current Applicant Tracking Systems (ATS) and HR software.
- ◆ Develop strategies to monitor and reduce bias in AI algorithms. Implement regular audits and updates to maintain fairness in the recruitment process.
- ◆ Ensure the solution is adaptable to changing technologies, recruitment practices, and workforce dynamics.
- ◆ Engage with HR professionals and candidates to gather insights and refine the solution based on their needs and preferences.

IMPACT

Efficiency and time saving

Automating resume screening and initial interviews streamlines the recruitment process, allowing hiring managers to focus on the most qualified candidates more quickly.

Higher Quality Hires

By leveraging AI algorithms to match candidates' skills and experiences with job requirements, companies can identify candidates who are more likely to succeed in their roles.

Reduction of Human Error

Automated systems reduce the risk of human error in screening and evaluating candidates, ensuring that all applicants are assessed based on the same criteria.

Cost Reduction

By automating initial stages of recruitment, companies can reduce the time and resources spent on manual screening and interviews, leading to cost savings.