

# Personalized job prep with JobRaidy

**Machine Learning II**

*Group Assignment*



**Professor:** Conchita Diaz

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# Personalized job prep with JobRaidy

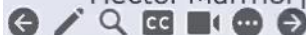
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# The growing need for personalized job-preparation

## Business Problem

- The job market has become increasingly competitive, creating an **employer-driven environment** where candidates face more pressure to stand out
- **Every application requires considerable time** invested by the applicant — on average 3-4 hours<sup>1</sup>
- Applicants often **lack personalized guidance** in preparing for interviews, impacting their chances of success
- Helping applicants could significantly enhance hiring outcomes and reduce time-to-hire, which benefits both candidates and employers economically

## Existing Solution & Gap

- Many platforms offer interview preparation support such as Glassdoor, Big Interview, and LinkedIn Interview Prep
- However, **few provide personalized scoring, job-specific coaching, or real-time company insights using generative AI**. Applicants need to connect many services themselves, which is time-intense
- There's a market opportunity to enhance this process through AI-powered, adaptive application support and interview coaching



**There is a clear need for applicants to receive tailored, personalized and end-to-end job support**

<sup>1</sup>Glassdoor, 2023

# The applicant journey: from CV to interview confidence

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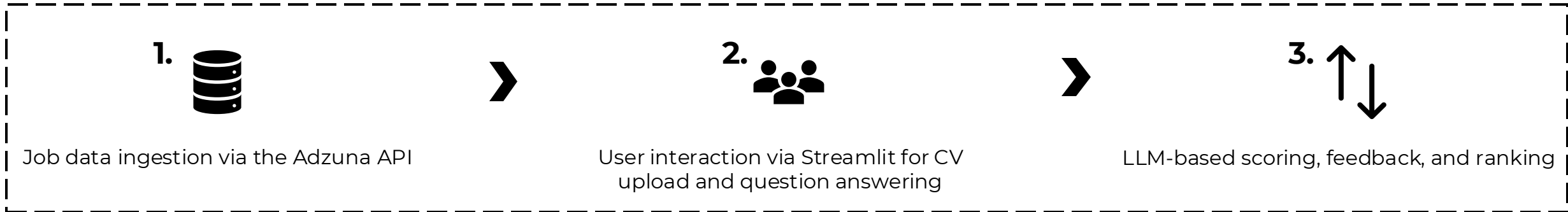
**Our solution JobRaidy is an AI-driven platform** to personalize job interview preparation, using a mix of generative AI, and comparative analytics.

## Our offerings to job applicants



# JobRaidy's technical backbone

Our solution leverages large language models (LLMs), specifically **Gemini 1.5 Pro**, to assess job fit based on CVs and interview-style answers. The solution uses **LangChain** to orchestrate interactions between user inputs, job data, and the LLM.



## Backend

## Frontend



API.py






classes.py





**Retrieval Augmented Generation (RAG) is not required in this application.** All relevant job context is already passed directly into the LLM via structured prompts. This allows for fast, real-time feedback without the need for embedding-based retrieval or external vector stores.



## Evaluation of solution

-  **Effectiveness:** Personalized experience, simulated Q&A, data-backed insights.
-  **Limitations:** Data privacy concerns, generalization risk for niche roles, bias in training data, limitation of tokens in the Google API Key
-  **Ethical Design:** Ensuring fairness in scoring; explainability in AI answer

## Future development of the solution

-  **Collect data on applicants**  
Including adding login feature to track individuals effectively. Data collection interesting for companies advertising jobs to understand application pool
-  **Sell JobRaidy to companies to automate first interview**  
Additional features needed, such as redirection ability of AI agent (Reinforcement Learning), applicant analytics dashboard



